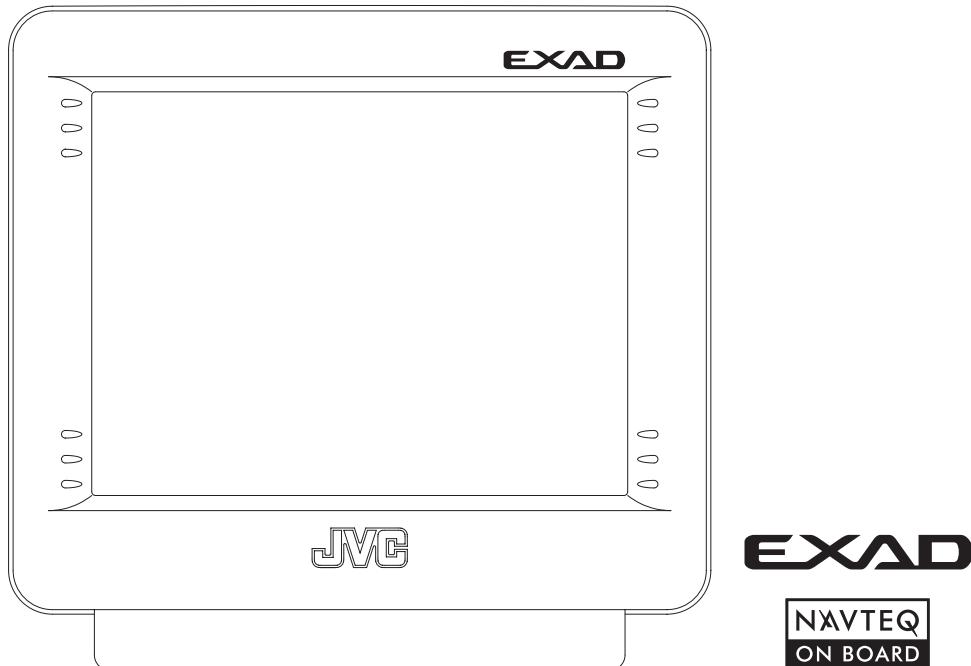


JVC

SERVICE MANUAL

PORTABLE HDD NAVIGATION

**KV-PX9BJ, KV-PX9SJ,
KV-PX9BNJ, KV-PX9SNJ**



Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

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SPECIFICATION

Navigation system	System & Service		L1, C/A code Global Positioning System Standard Positioning Service
	Built-in GPS		8-channel GPS Receiver with internal antenna
	Reception Frequency		1 575.42 MHz
	Sensitivity		-130 dBm
	Update Rate		1/second, continuous
	Map database		US, Canada, Puerto Rico, US Virgin Islands
Audio amplifier system	Power Output		1.2 W × 2 (Stereo speakers) 30 mW + 30 mW, Max. (phones)
HDD/SD section	Memory type		64 Mbyte RAM + 20 Gbyte Hard Disk storage
	Usable SD card*	Format	FAT 12/16/32
		Storage	8 MB to 512 MB
		File name	Up to 128 characters (including extension code)
Compatible OS's *		Microsoft® Windows® 2000, Windows® XP	
General	CPU		312 MHz PXA270 processor
	Power supply	AC Adapter	AC 100 V - 240 V , 50 Hz/60 Hz
		Cigarette Lighter Adapter	DC 12 V/24 V
	Power consumption		3 W 10 mW (on standby)
	Built-in battery		Rechargeable internal Li-Ion battery (lasts about 4 hours)
	Charging time		Approx. 3.5 hours (AC adapter)
	Operating Temperature		0°C to 40°C (32°F to 104°F)
	Dimensions (W/H/D)		92,8 mm × 87,3 mm × 49,3 mm (311/16 in. × 37/16 in. × 115/16 in.)
Mass		350 g (0,76 lbs)	

* You cannot use MMC or mini SD.

- Design and specifications subject to change without notice.
- Microsoft and Windows Media are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- This unit is not compatible with Multiple Bit Rate (MBR: a file that contains the same content encoded at several different bit rates).

SECTION 1 PRECAUTION

1.1 Safety Precautions



CAUTION Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of performing repair of this system.

SECTION 2 SPECIFIC SERVICE INSTRUCTIONS

This service manual does not describe SPECIFIC SERVICE INSTRUCTIONS.

SECTION 3 DISASSEMBLY

3.1 Main Body

3.1.1 Removing the battery (See Fig.1, 2)

- (1) Remove the two screws **A** attaching the battery cover and then take out the battery cover. (See Fig.1)
- (2) Disconnect the connector wire from the connector [CN100](#) of the main board. (See Fig.2)



Fig.1

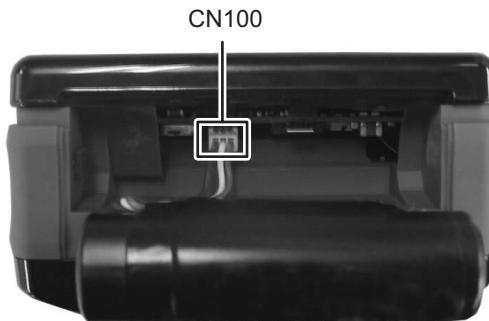


Fig.2

3.1.2 Removing the rear panel (See Fig.3)

- (1) Remove the four screws **B** attaching the rear panel.

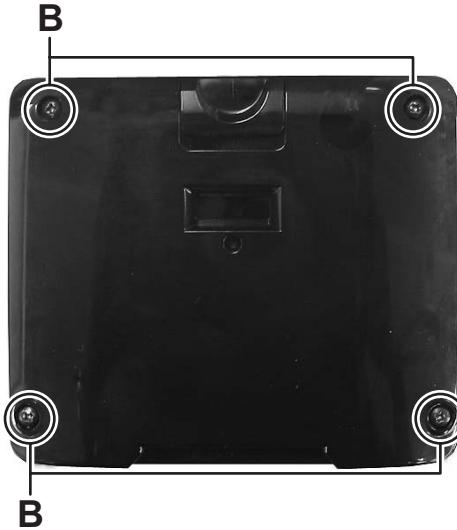


Fig.3

3.1.3 Removing the front panel and the touch panel

(See Fig.4, 5)

- (1) Remove the four screws **C** attaching the front panel. (See Fig.4)
- (2) Disconnect the flexible wire of the touch panel from the connector [CN700](#) of the main board. (See Fig.5)
- (3) Take out the front panel, the caution label and the touch panel. (See Fig.5)

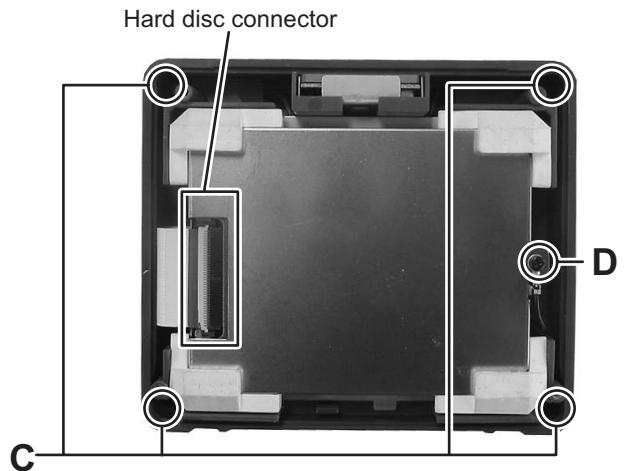


Fig.4

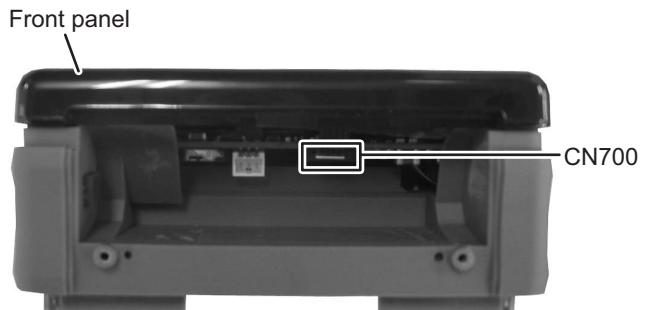


Fig.5

3.1.4 Removing the LCD

(See Fig.6)

- (1) Disconnect the flexible wire from the connector [CN350](#) of the main board and then take out the LCD.



Fig.6

3.1.5 Removing the HDD

(See Fig.4)

- (1) Remove the one screw **D** attaching the earth wire.
- (2) Disconnect the hard disc connector from the HDD.
- (3) Take out the HDD and HDD cover.

3.1.6 Removing the main board

(See Fig.7)

- (1) Remove the four screws **E** attaching the main board.
- (2) Disconnect the connector wires from the connectors CN750, CN751 of the main board.
- (3) Disconnect the antenna wire.

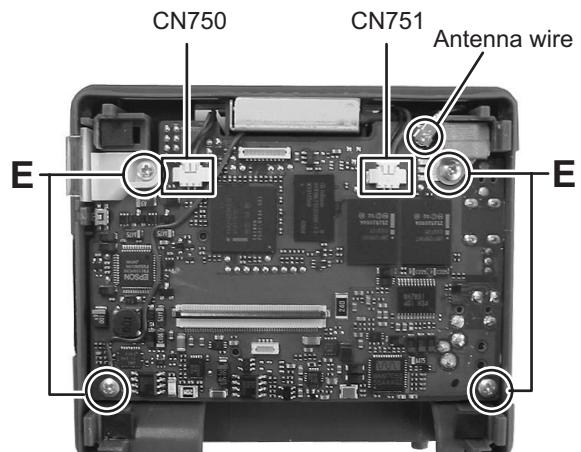


Fig.7

3.1.7 Removing the speakers

(See Fig.8)

- (1) Remove the eight screws **F** attaching the speakers.

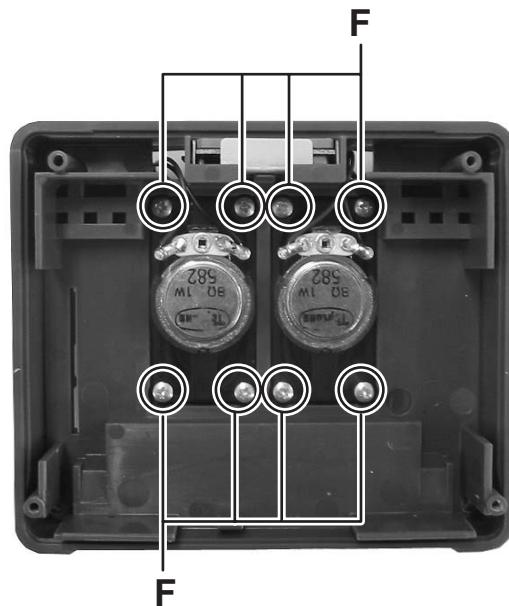


Fig.8

SECTION 4 ADJUSTMENT

4.1 Service mode

Note:

The new HDD from parts center is blank.

Before replacing HDD, data from the master HDD needs to be copied (use disk copy machine).

To enter the service mode

1. Turn on the power.
2. Press the [Menu] on the Navi screen.
3. Press the [SETUP] on the Menu screen.
4. Press and hold the [▼] on the SETUP screen.
5. Keep continuing pressing the dim [▼] more than 5 seconds or until you hear [beep] sound.
6. Press the [SETUP] on the top left of Menu screen.

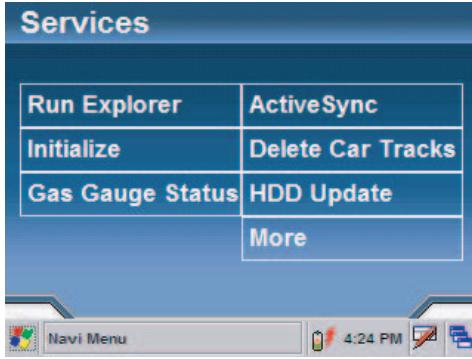


Service Mode Menu (1/2)

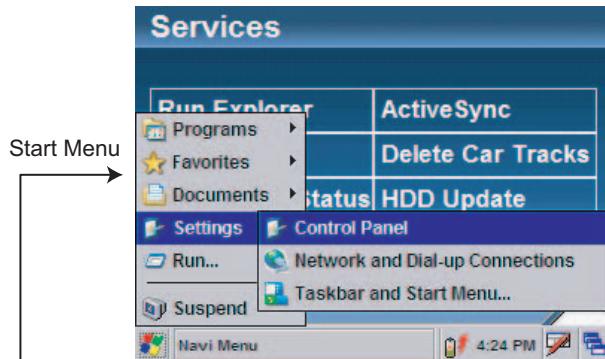


Run Explorer

↓ Press Run Explorer

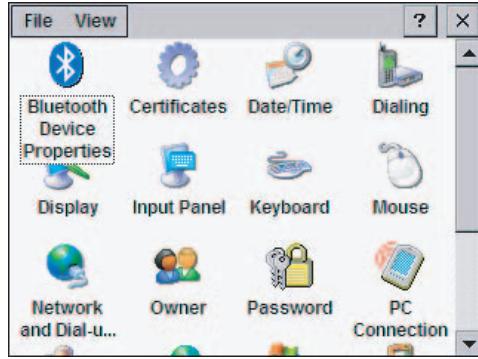


"Run Explorer" allows to access the Windows CE.



Start Menu

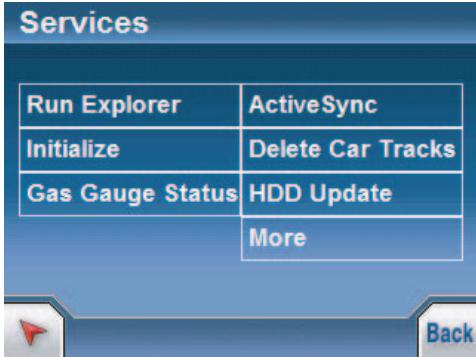
↓ Start Menu Control Panel



Control Panel screen can be used for information purposes only.

Replacing the HDD will not reset the map update countdown (365 days).

Performing INITIALIZE will reset the map update countdown.



Run Explorer can be used to access Windows CE OS.
ActiveSync, Delete Car Tracks and HDD Update are options only used by factory only used by factory during design process.

Initialization resets unit to its initial factory state.

HDD Update: updates firmware using "kv px9 Update.exe" file-not used for service.

Gas Gauge Status is used for checking built in battery status.

After selecting "More" the following options are available:



GPS Log, Navi Log, Navi Playback Log and Car Tracks are options only used by factory.

NaviDisk Visible allows seeing all partitions after connecting to PC through USB.

Debug Info can be used to verify GPS reception, temperature and system time.

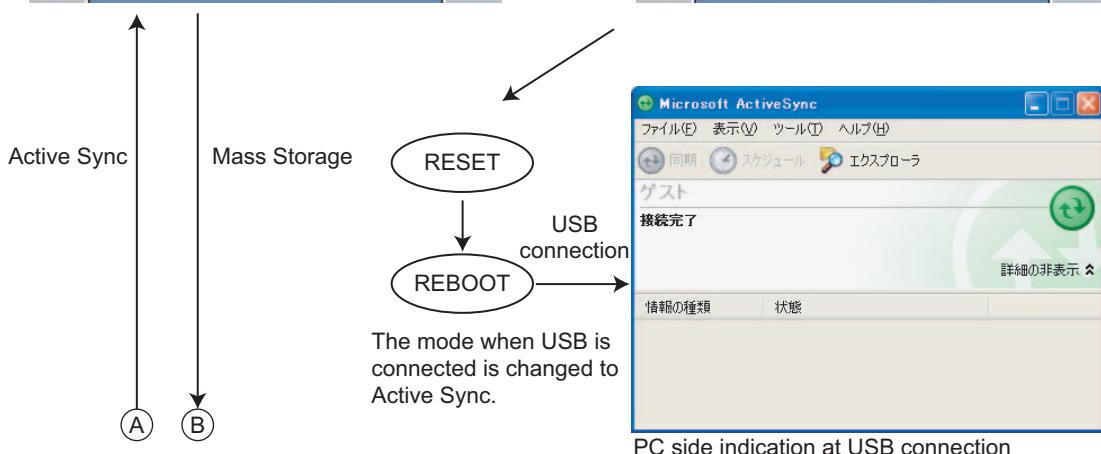
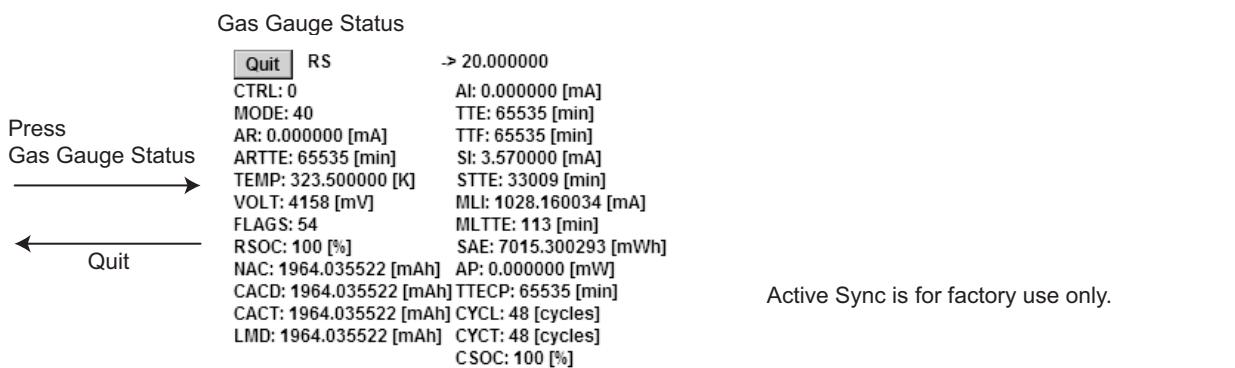
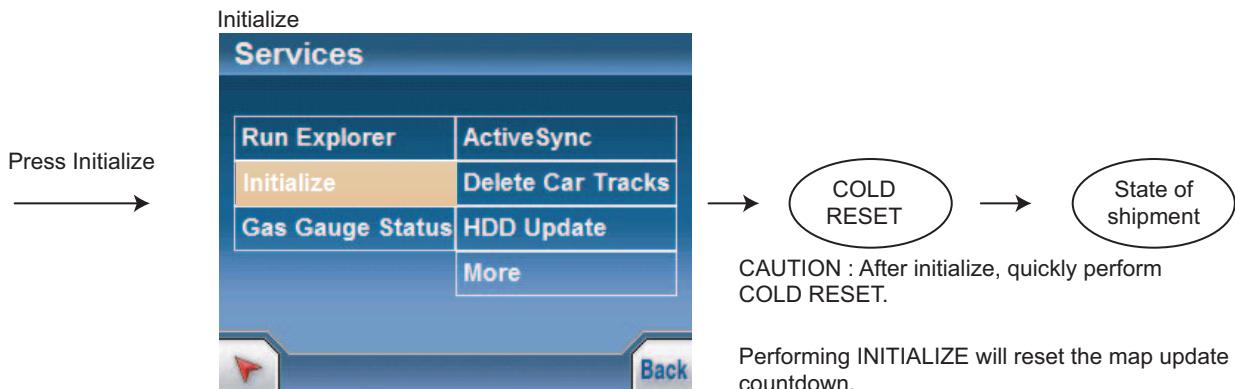
MapMatching should be checked by default. It puts car position (from GPS signal) onto existing roads map.

VP Button (Red Arrow). This returns to map viewing screen.

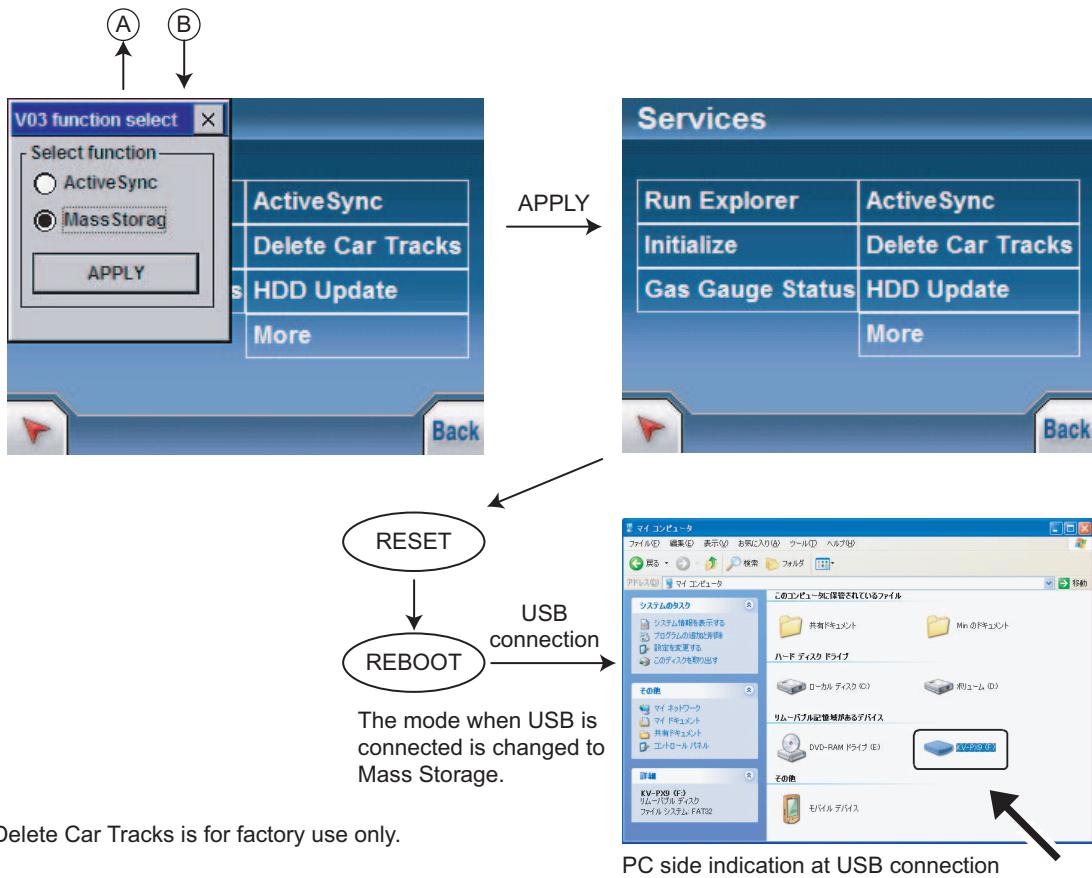
After changing any settings in service menu either BACK or VP button must be pressed then perform the RESET procedure.

RESET : Press RESET button located under the POWER button on left side of main body (it is not marked).

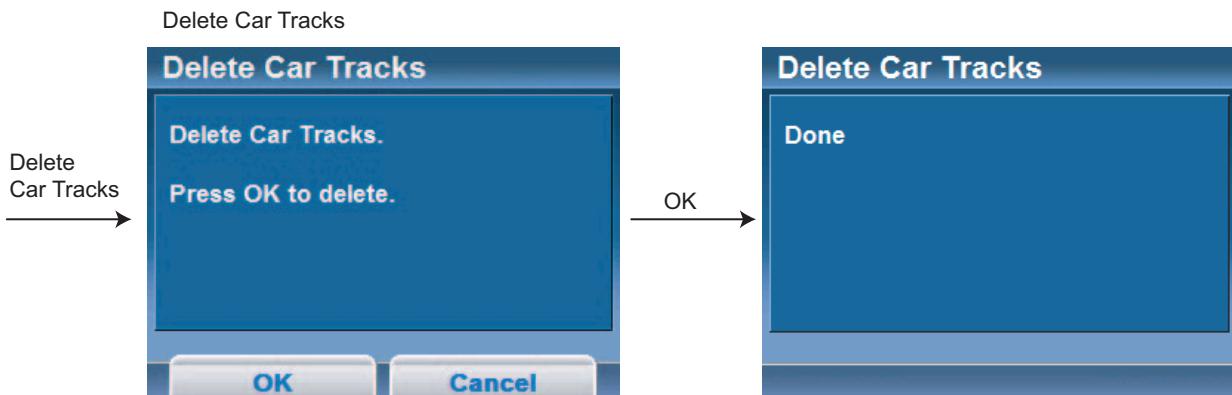
COLD RESET : Disconnect the AC or Car Adapter, turn off battery switch (located on the right side of main body). Wait 10 seconds, reconnect AC or Car Adapter and turn the battery switch to ON.



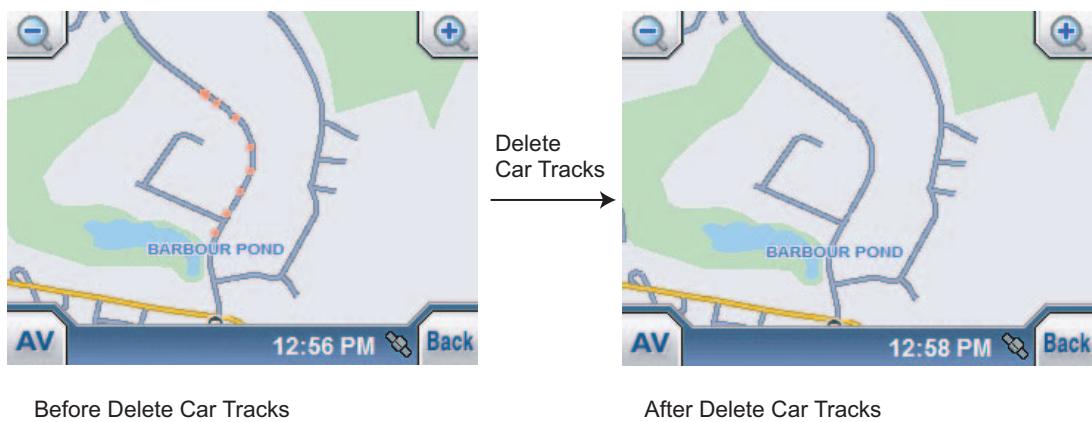
PC side indication at USB connection



Delete Car Tracks is for factory use only.



The running tracks are deleted with Delete Car Tracks as shown in a next picture.



Before Delete Car Tracks

After Delete Car Tracks



* What is the GPS log?

* What is the G-Log?
It is output file from EPSON GPS engine.

*.txt ----- GPS engine log

* dat ----- Data for GPS simulation

*.dat ----- Data for GPS simulation
*.csv ----- Various GPS information text data

Log will save to Navidisk \ Log folder.

It provides for the file name as follows.

GPS Log:

YYYY-MM-DD-HH-MM-SS.csv,dat,txt

(exp:2006-05-06-12-43-27.dat)

When power to off, all log files(.csv,dat,txt) save to HDD

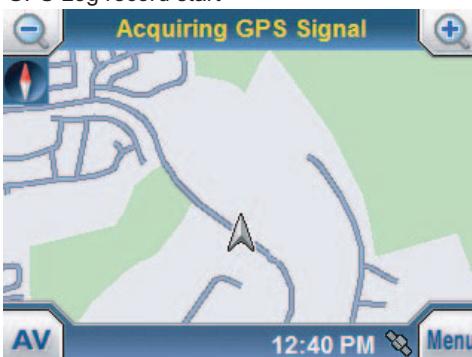
Until Power Off is done. Whenever 500kB collects, the dat file adds a postscript to

file complete set (.csv.dat.txt) and preserves it.

A postscript is added to the same file until Power Off is done.

GPS Log save

GPS Log record start



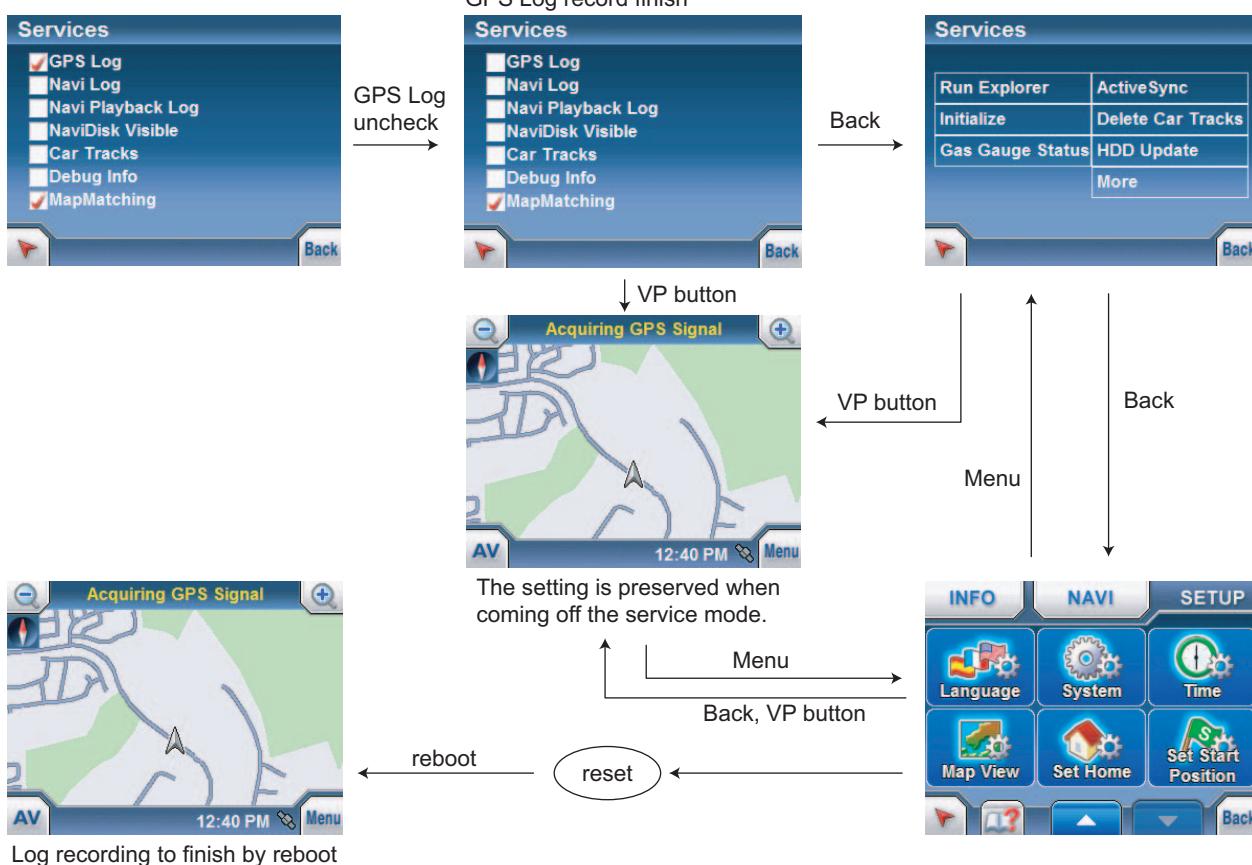
Log recording

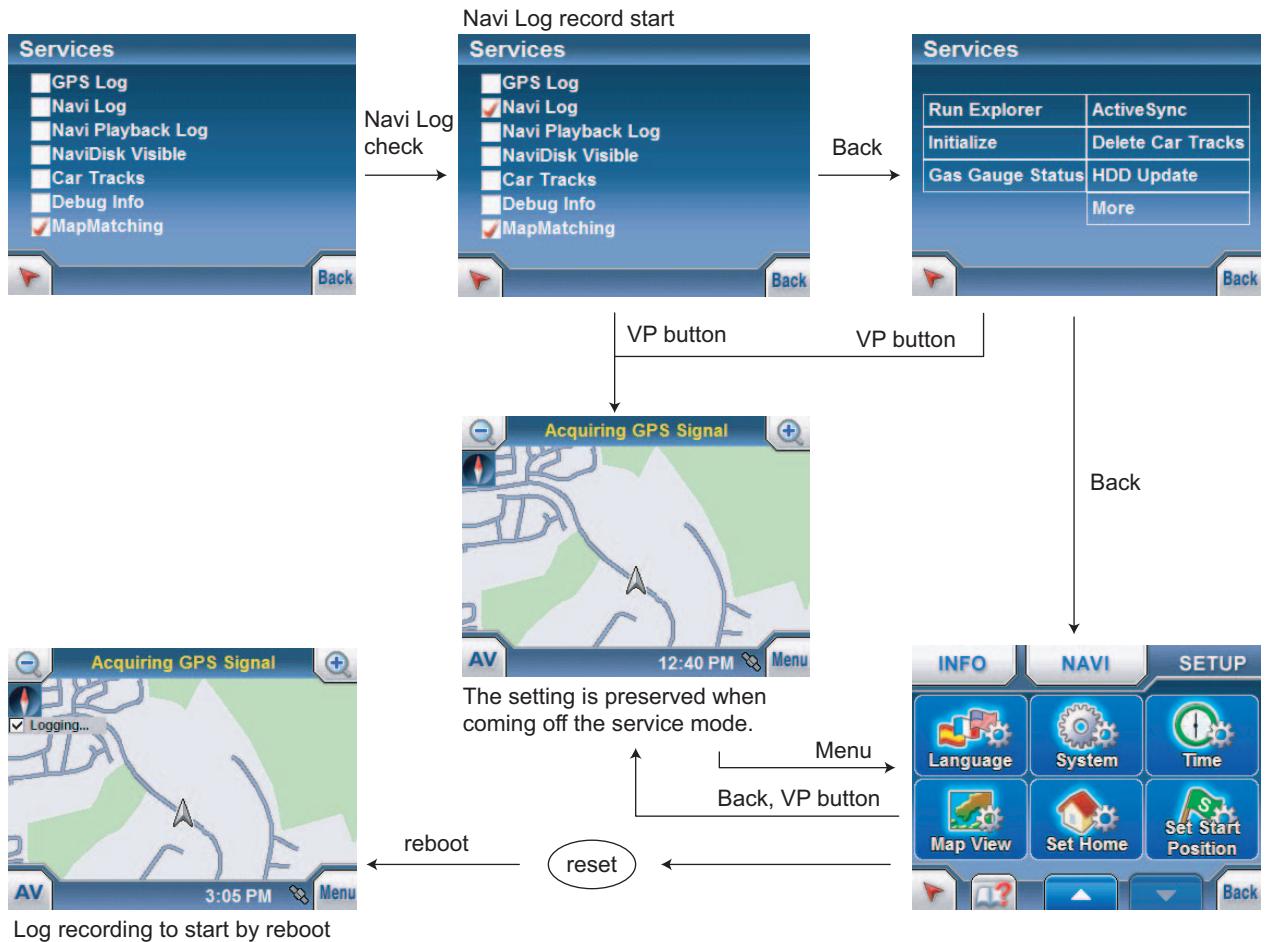
.DAT file preserves it in HDD whenever 500kB collects.

.DAT file preserves the Log file complete set whenever 500kB collects automatically.

Power
OFF

All Log files save to HDD.
A postscript is added to the
same file until Power Off is
done.v





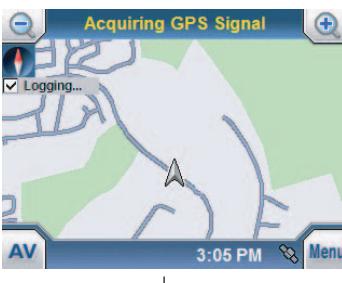
Log will save to Navidisk ¥Log folder.
It provides for the file name as follows.

Navi Log:

YYYY-MM-DD-HH-MM-SS.LOG
(exp:20060506124327.LOG)

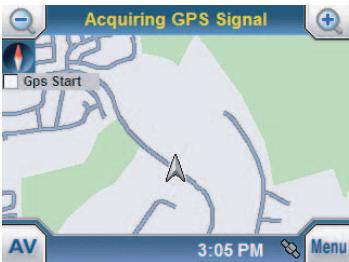
A different Log file whenever the Log record is stopped temporarily is made.

Navi Log preservation and temporary stop



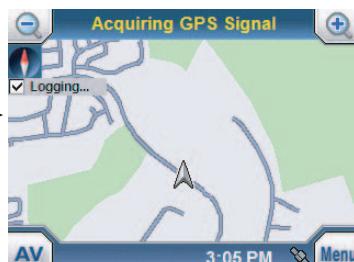
Navi Log recording

Logging uncheck



The record of Navi Log is temporarily interrupted.
Recorded Navi Log is preserved in HDD.
It preserves it with a different file whenever stopping temporarily.

GPS Start check

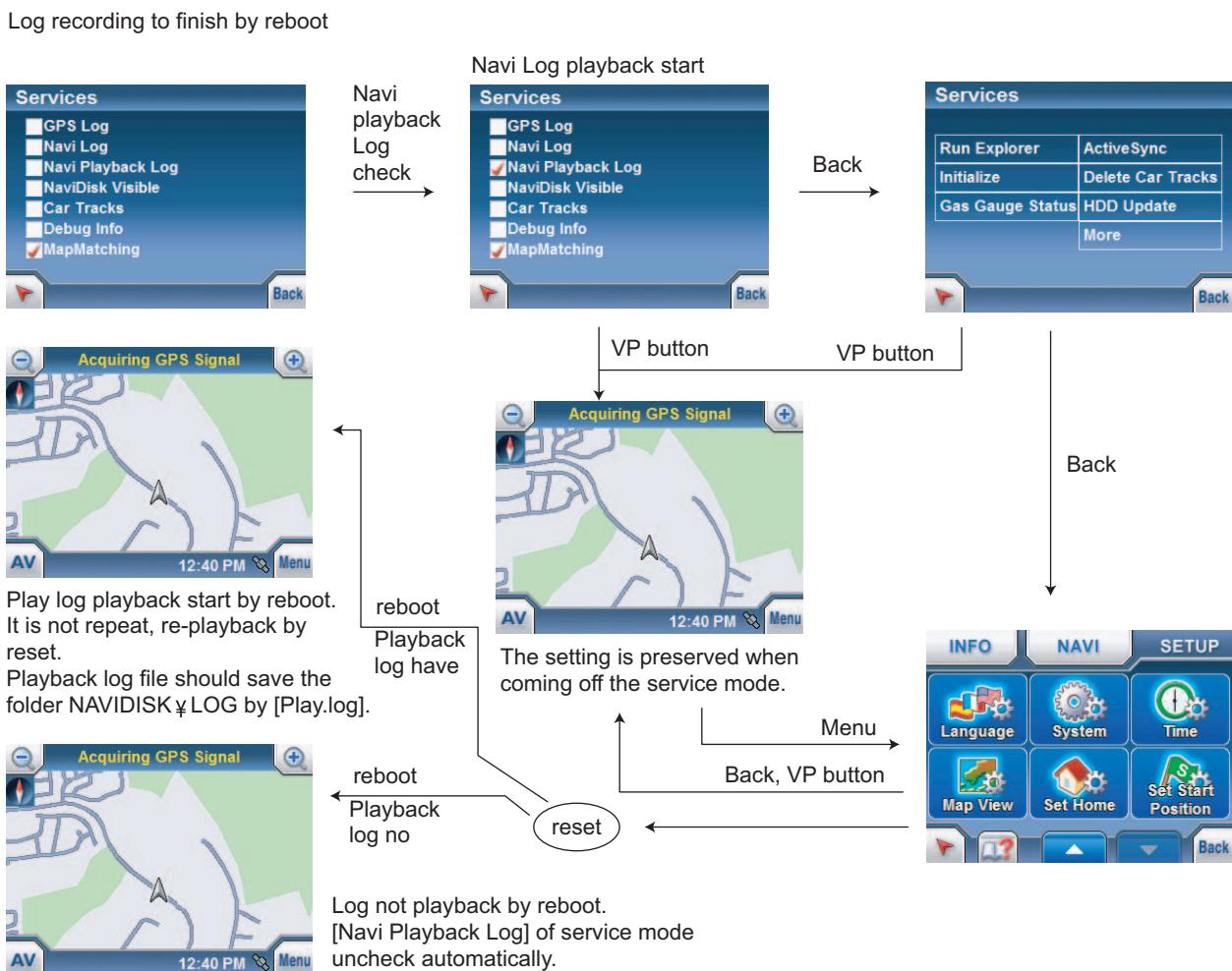
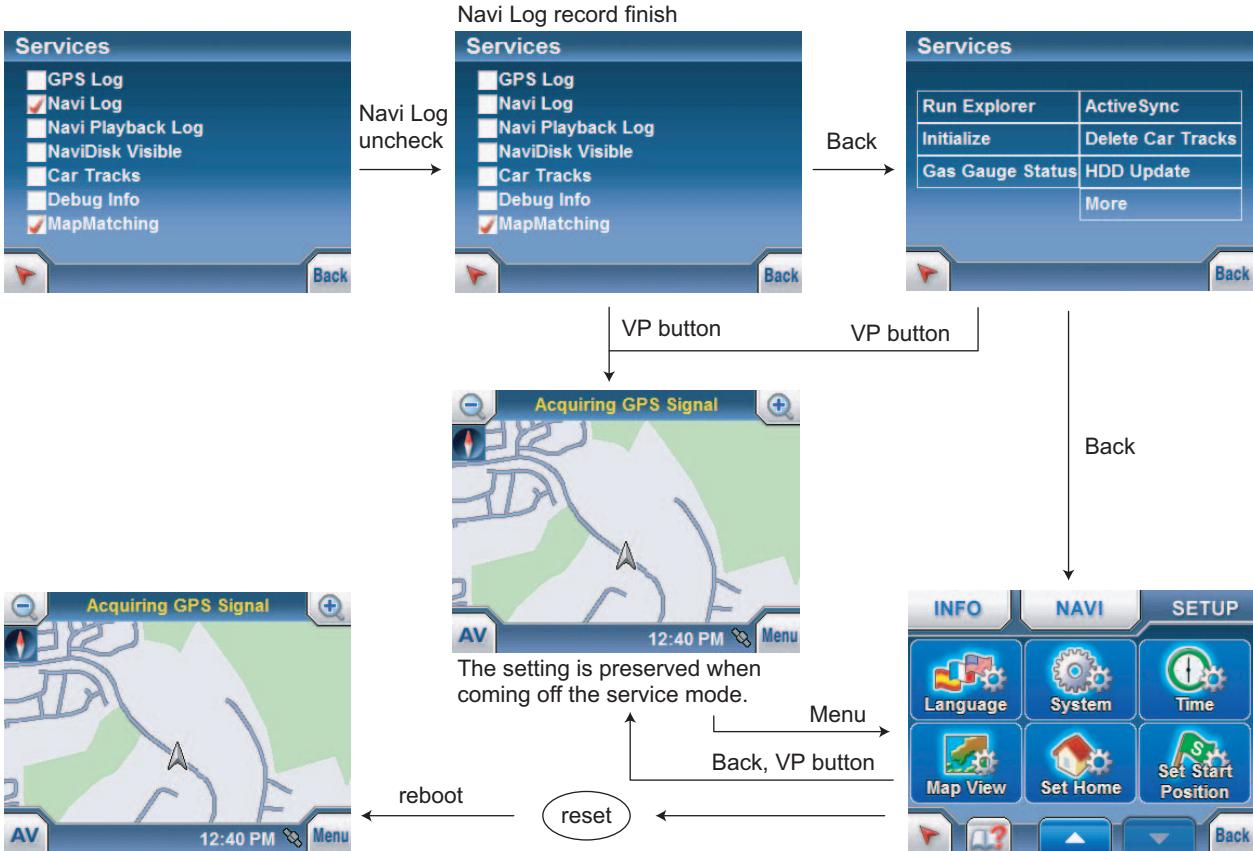


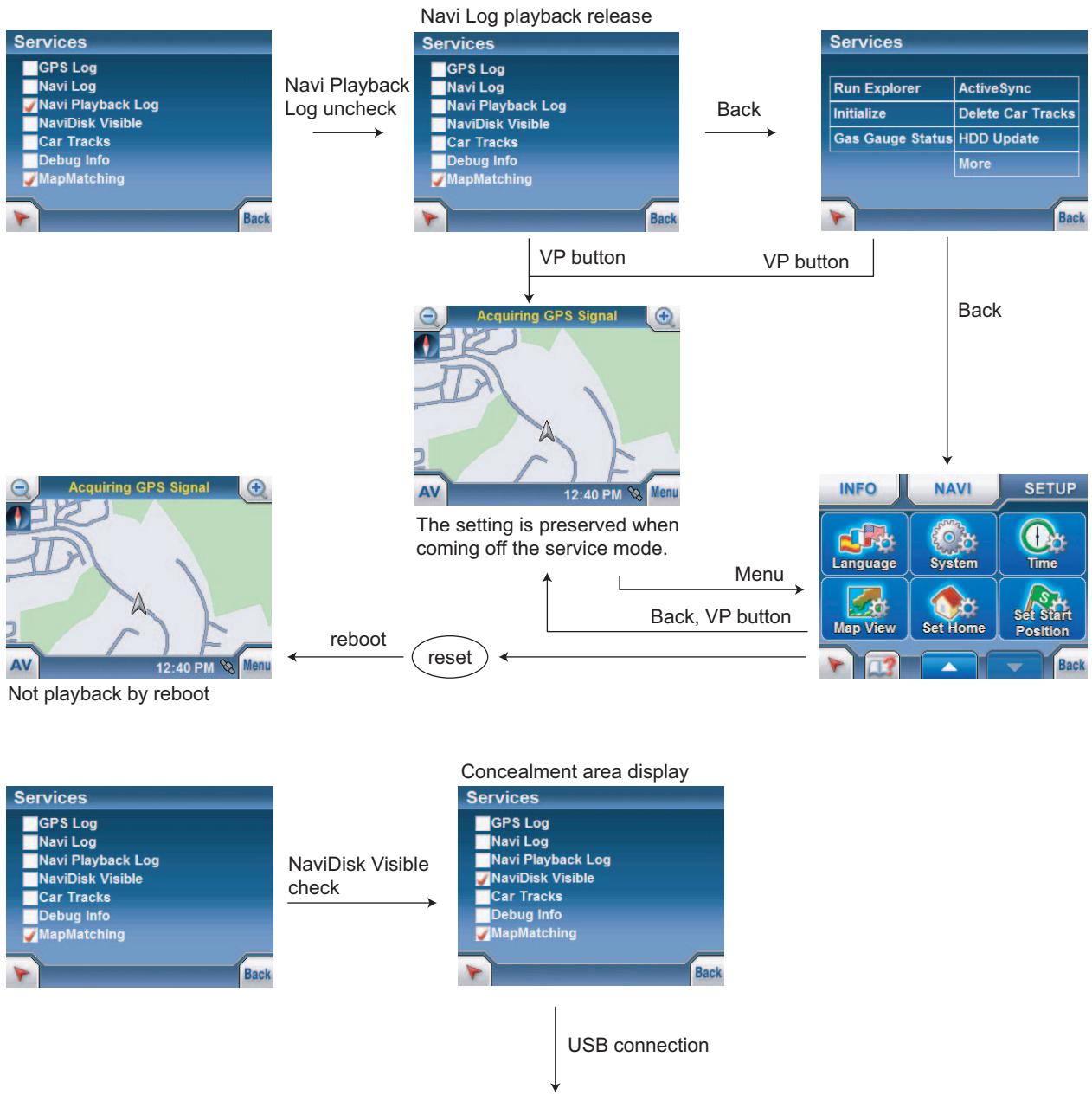
Navi Log record re-start

Logging uncheck

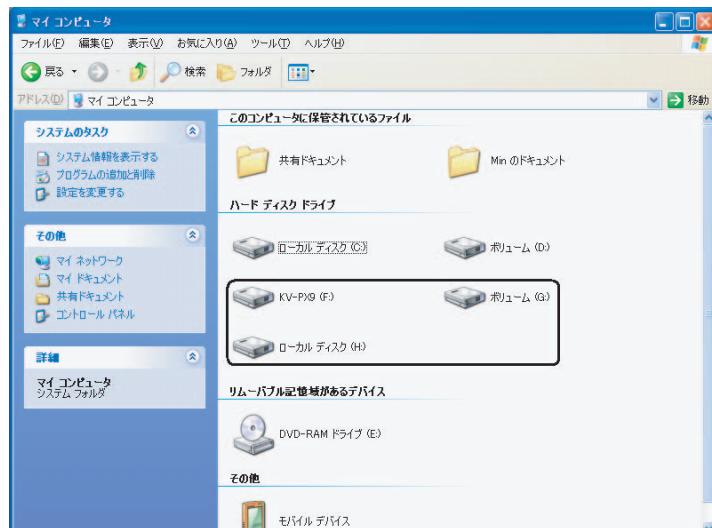


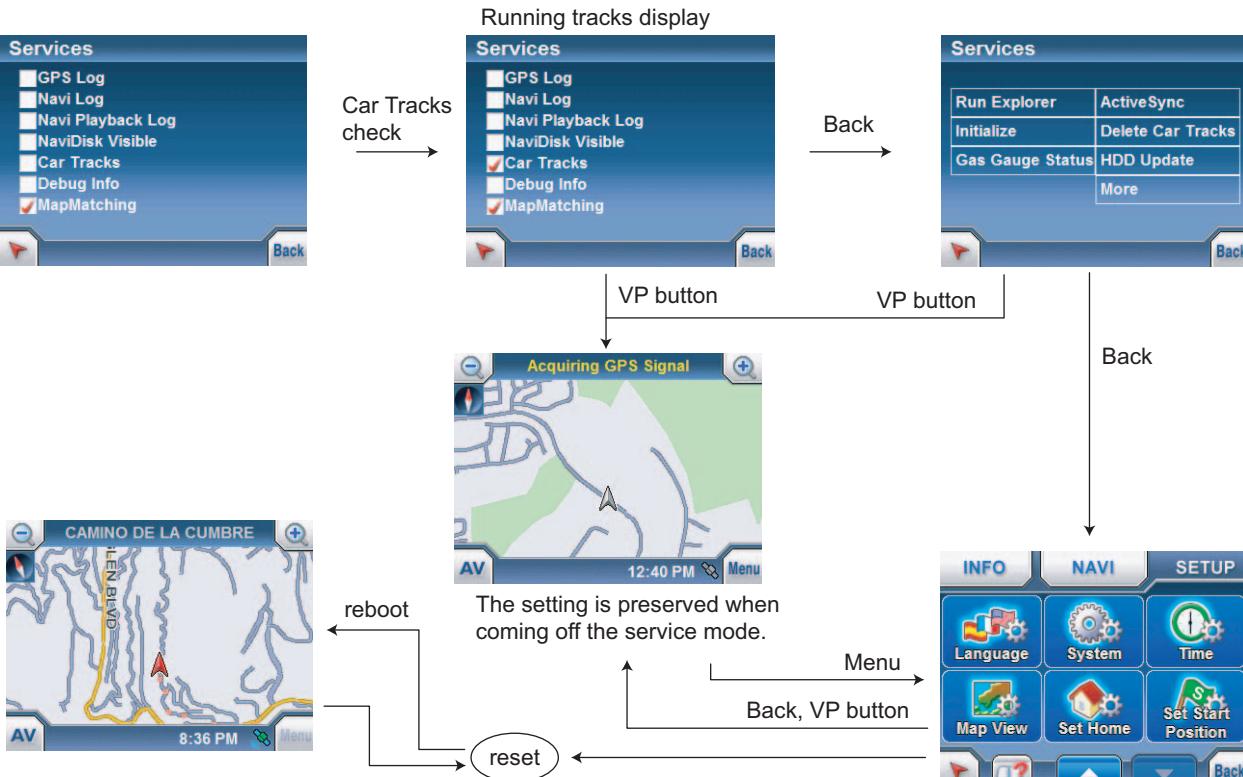
The record of Navi Log is temporarily interrupted.
Recorded Navi Log is preserved in HDD.
It preserves it with a different file whenever stopping temporarily.



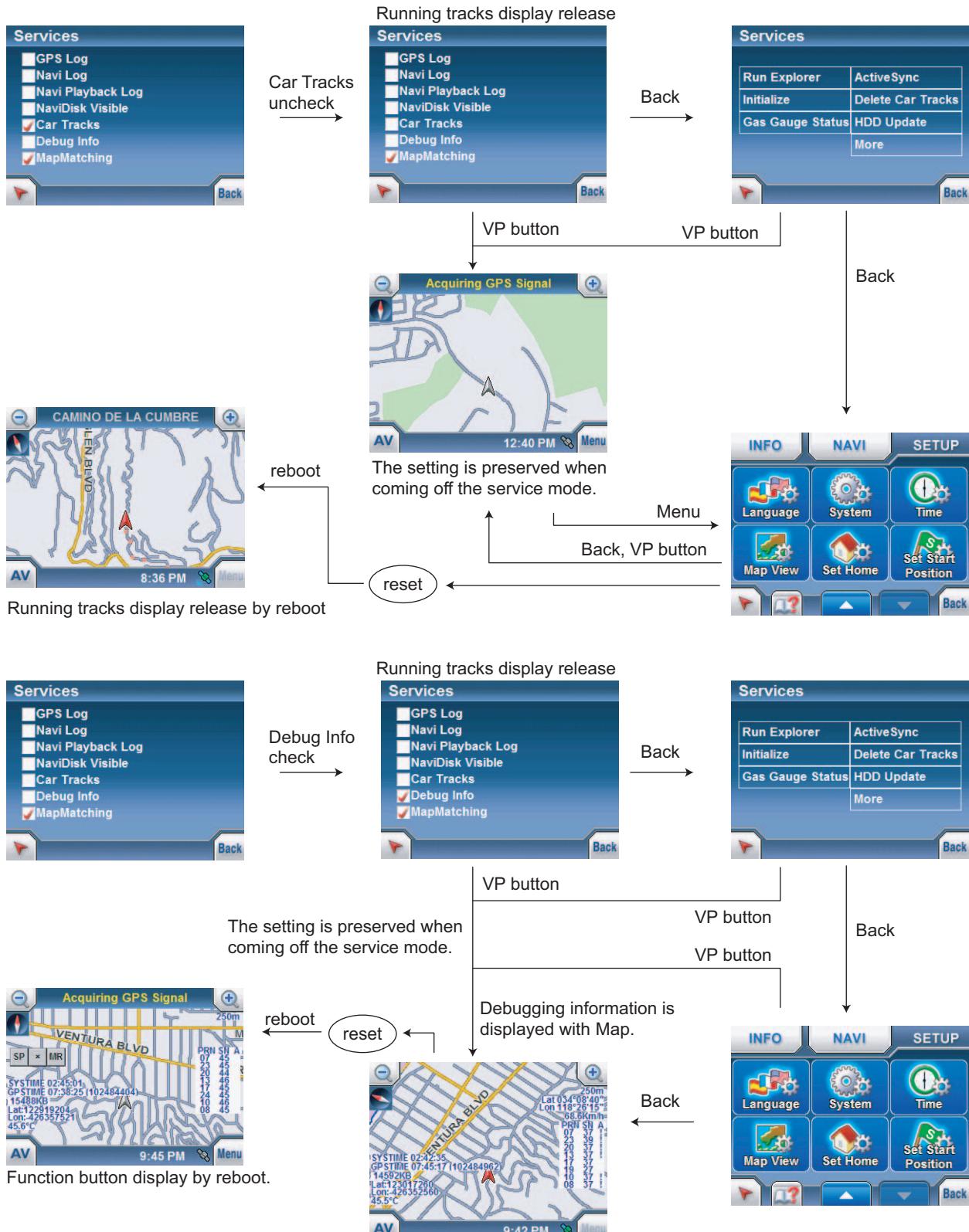


When USB is connected all 3 partitions are visible.
Memory area is shown as KVPX9, other two
partitions names are not recognized properly.
The partition with all map data and OS is assigned
drive letter "G", A/V player is assigned letter "H".
All are displayed as "Volume" or "Local disk".
If network drives are presently assigned to those
letters they need to be disconnected.
Screen on the right shows Japanese OS .
US version drives will be:
KV-PX9(F:)
Volume:(G:)
Local disk:(H:)



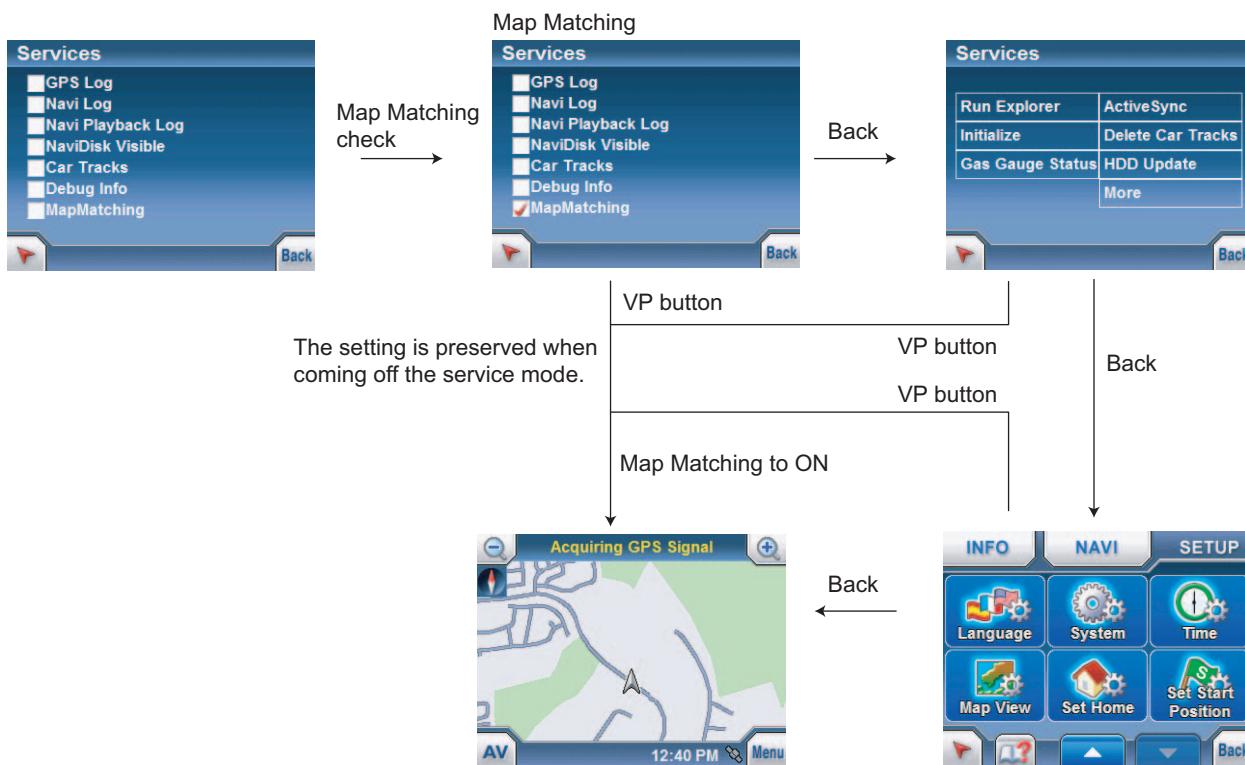
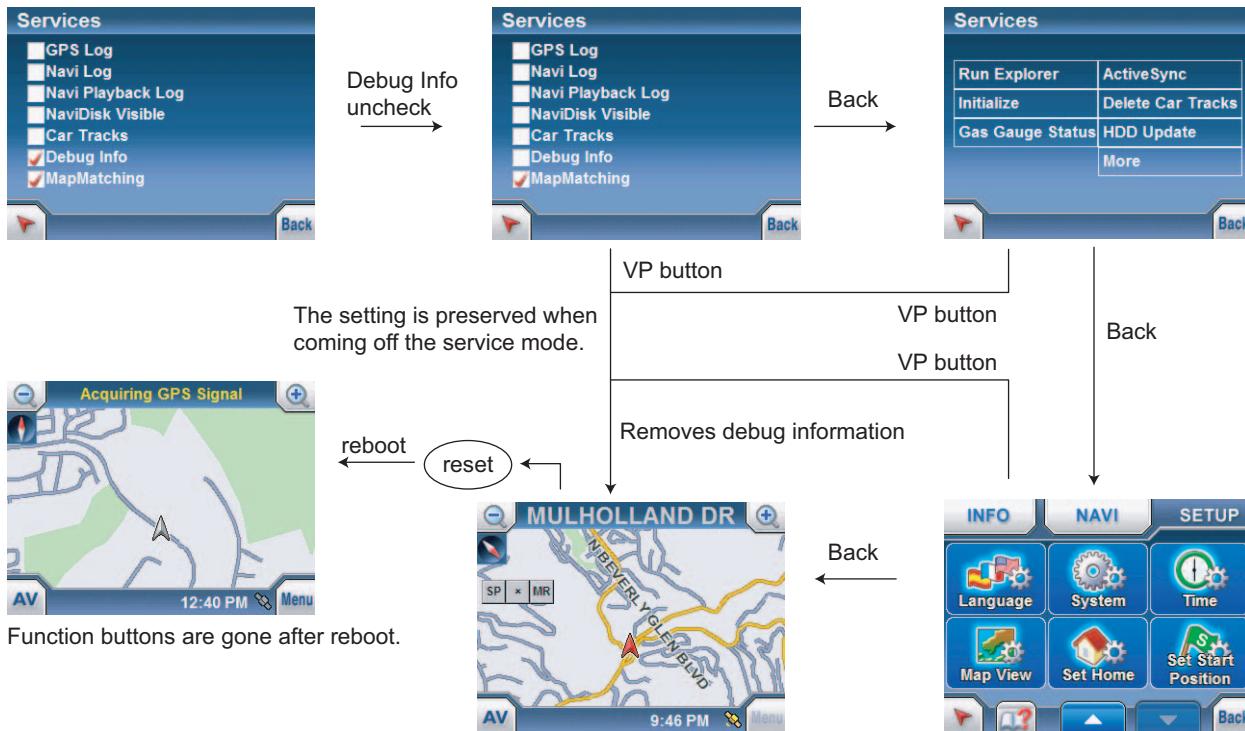


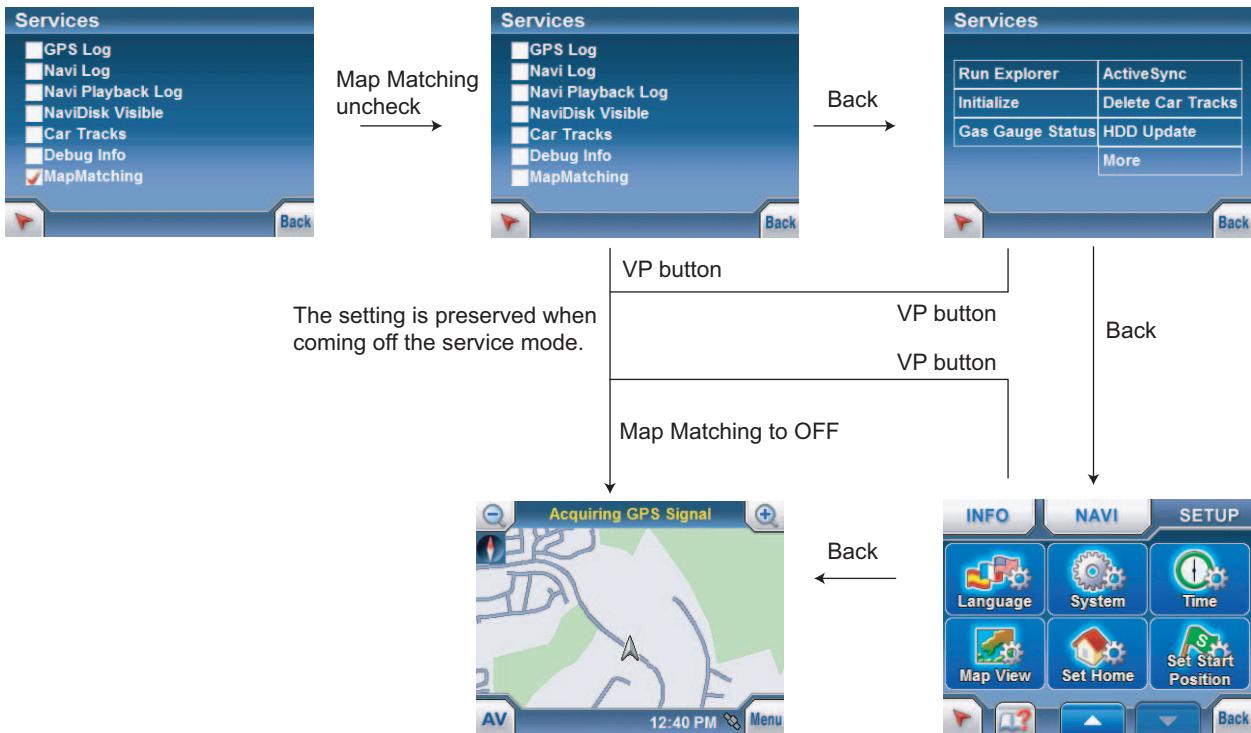
Display beginning of running tracks on reactivation.
Refer to "Delete Car Tracks" for the deletion of the running tracks.



SP: Set Start Position button
X: End of application and start of Explorer
MR: Map match reset.
SYSTIME: System time.
GPSTIME: Time.
Remaining amount of the memory.
Lat: Latitude of cursor.
Lon: Longitude of cursor.
Internal temperature: Centigrade.

Map scale: Only metric display
Lat: Latitude of VP by GPS
Lon: Longitude of VP by GPS
PRN: PRN (Pseudo Random Noise) current satellite ID
SN: Signal strength of GPS (range from 0 to 50)
A: Currently used for measurement.





4.2 View of gas gauge data

```

Quit RS      → 20.000000
CTRL: 0      AI: 0.000000 [mA]
MODE: 40     TTE: 65535 [min]
AR: 0.000000 [mA] TTF: 65535 [min]
ARTTE: 65535 [min] SI: 3.570000 [mA]
TEMP: 323.500000 [K] STTE: 33009 [min]
VOLT: 4158 [mV] MLI: 1028.160034 [mA]
FLAGS: 54    MLTE: 113 [min]
RSOC: 100 [%] SAE: 7015.300293 [mWh]
NAC: 1964.035522 [mAh] AP: 0.000000 [mW]
CACD: 1964.035522 [mAh] TTECP: 65535 [min]
CACT: 1964.035522 [mAh] CYCL: 48 [cycles]
LMD: 1964.035522 [mAh] CYCT: 48 [cycles]
CSOC: 100 [%]

```

4.2.1 Confirmation whether normal battery charge is possible.

- (1) If TEMP value is 340K or less, RSOC value is confirmed and less than 100%.
 - (2) If an external power supply is connected, purple LED lights, and FLAGS doesn't become 99 or more (Please allow the time lag of at least 10 seconds after connecting an external power supply).
- If internal temperature is above 104 Fahrenheit (shown in Debug Mode pg 1-18), battery will not be charged.

4.2.2 Confirmation of battery failure.

- (1) If LMD is 2000 or less and the value of CYCT is confirmed.
 - (2) Battery should be replaced when CYCT is 500 or more.
 - (3) After KVPX9 shuts down due to Low Battery (auto shutdown) when CYCT is 500 or less but battery is full charged.
Still, if LMD is 2000 or less, a defective battery or circuit malfunction can be at fault.
- * The check on (MENU-SETUP-System-Auto Power Off) should be removed at this time to allow full battery discharge.

KVPX9 initialization after battery exchange.

It is necessary to initialize unit and study the gas gauge parameter. Initialization can be performed by either of the following:

- (1) Leaving KVPX9 for half a day with the battery removed.
 - (2) Both ends of C140 are short-circuited with the battery removed (capacitor is discharged).
- Initialization is possible when the value of LMD is 2787 [mA] or more.

Gas Gauge Status after battery exchange.

Data is not correct immediately after the battery exchange. Fully charge new battery then continue to operate KVPX9 until the system auto shuts down before verifying Gas Gauge data..

*The check on (MENU-SETUP-System-Auto Power Off) should be removed at this time to allow full battery discharge.

Content of gas gauge data

Name	Function	Comment
RS	The Sense Resistor Value [mill ohm]	
CTRL	Device Control Register [Hex]	
MODE	Device Control Register [Hex]	
AR	At Rate [mA]	not used
ARTTE	At Rate Time-to Empty [min]	not used
TEMP	Reported Temperature [K]	TEMP contain the reported die temperature.
VOLT	Reported Battery Voltage [mV]	VOLT contain the reported battery voltage measured on the BAT pin.
FLAGS	Status Flags [Hex]	
RSOC	Relative Start-of-Charge [%]	RSOC reports the nominal available capacity as a percentage of the last measured discharge value (LMD).
NAC	Nominal Available Capacity [mAh]	NAC increments during charge(Vsrp > Vsrn) if Voltage > EDVF threshold and decrement during discharges (Vsrp > Vsrn).
CACD	Discharge Compensated NAC [mAh]	CACD reports available capacity in the battery.
CACT	Temperature Compensated CACD [mAh]	CACT reports available capacity in the battery, compensated for both discharge rate and temperature.
LMD	Last Measured Discharge [mAh]	LMD is the measured discharge capacity of battery from full to empty.
AI	Average Current [mA]	AI reports the magnitude of the average current through the sense resistor
TTE	Time-to-Empty [min]	TTE reports calculated time-to-empty at the measured discharge rate.
TTF	Time-to-Full [min]	TTF reports calculated time-to-full at the measured charge rate.
SI	Standby Current [mA]	SI reports measured standby current through the sense resistor.
STTE	Standby Time-to-Empty [min]	STTE reports calculated time-to-empty at the measured standby current value.
MLI	Max Load Current [mA]	MLI reports the measured Maximum load current through the sense resistor.
MLTTE	Max Load Time-to-Empty [min]	MLTTE reports calculated time-to-empty in minutes at the Maximum measured discharge rate.
SAE	Available Energy [mWh]	SAE is the calculated energy available from the battery.
AP	Average Power [mW]	AP is the calculated power delivered during a discharge.
TTECP	Time-to-Empty At Constant Power [min]	TTECP is the time-to-empty on minutes with a constant power load.
CYCL	Cycle Count Since Learning Cycle [cycles]	CYCL is the cycle count since the learning cycle.
CYCT	Cycle Count Total [cycles]	CYCT is the cycle count since a full reset.
CSOC	Compensated State-of-Charge [%]	OSOC reports the compensated available capacity as a percentage of the last measured value(LMD).

SECTION 5

TROUBLESHOOTING

This service manual does not describe TROUBLESHOOTING.



Victor Company of Japan, Limited

Mobile Entertainment Business Group Mobile Entertainment Category 10-1, 1chome, Ohwatari-machi, Maebashi-city, Gumma-ken, 371-8543, Japan

(No.MA272)

PARTS LIST

KV-PX9BJ,KV-PX9SJ
KV-PX9BNJ,KV-PX9SNJ

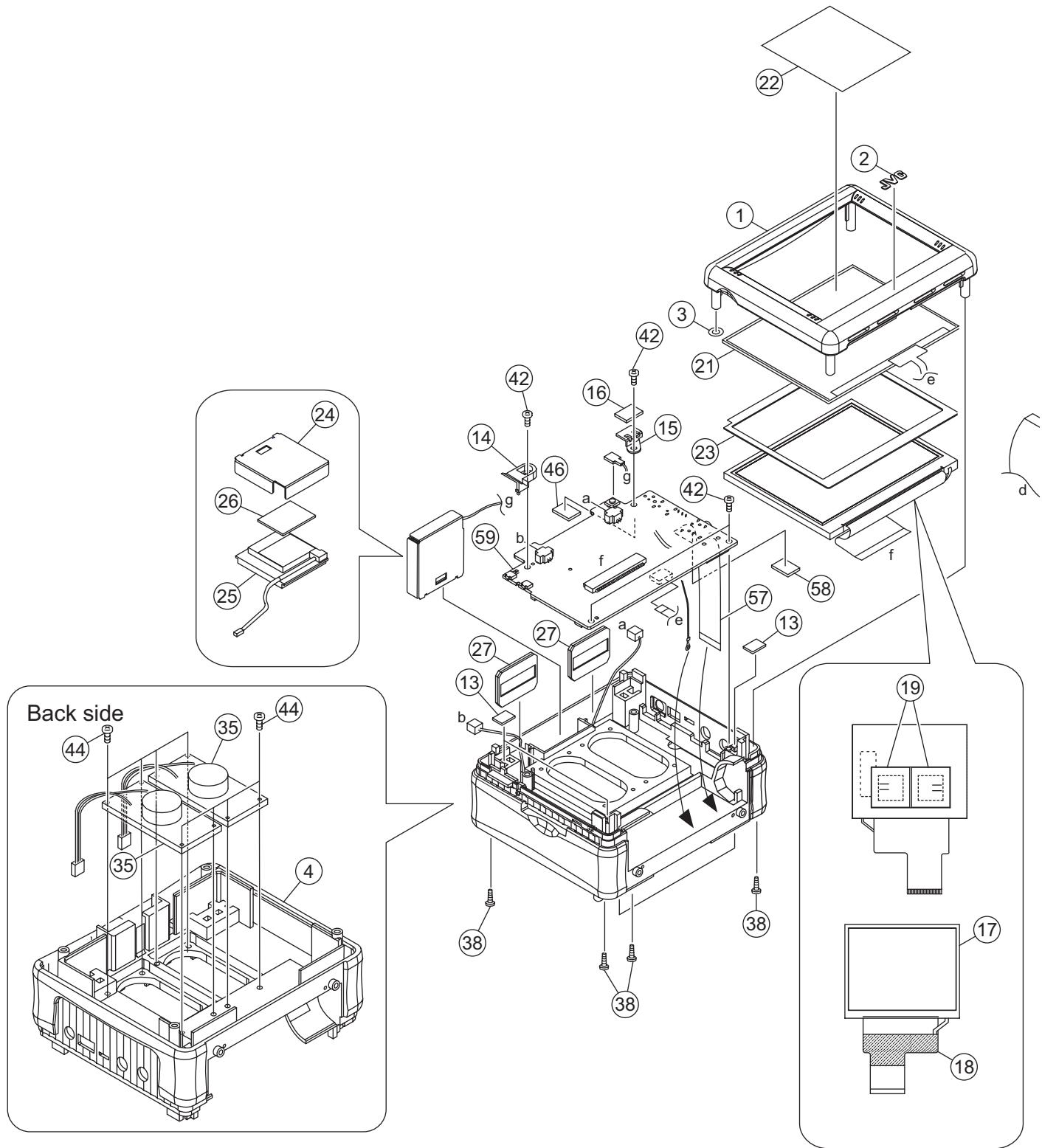
* All printed circuit boards and its assemblies are not available as service parts.

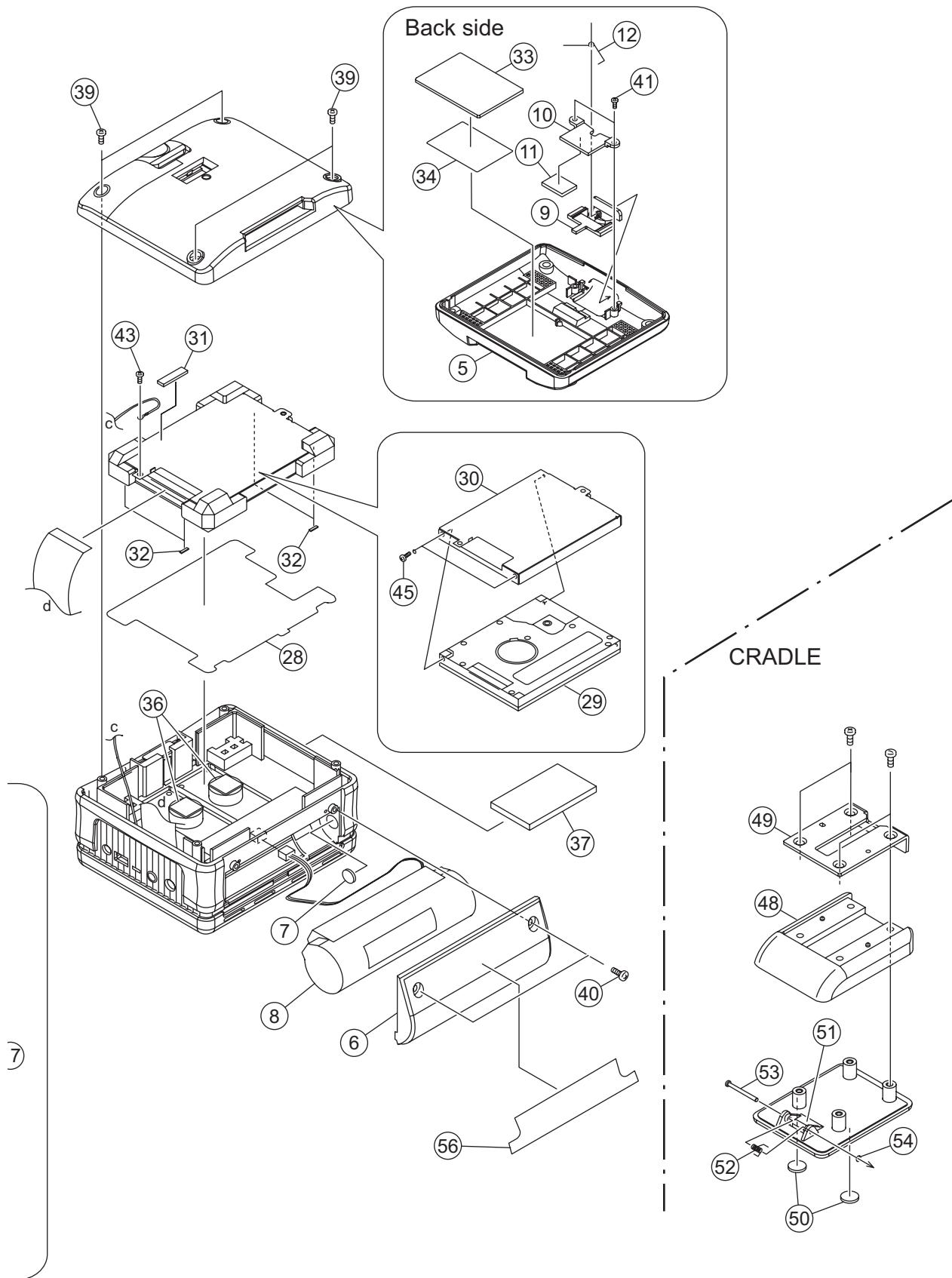
- Contents -

Exploded view of general assembly and parts list (Block No.M1)	3- 2
Packing materials and accessories parts list (Block No.M3)	3- 6

Exploded view of general assembly and parts list

Block No. M 1 M M





The parts without symbol number are not service.

General Assembly

Block No. [M][1][M][M]

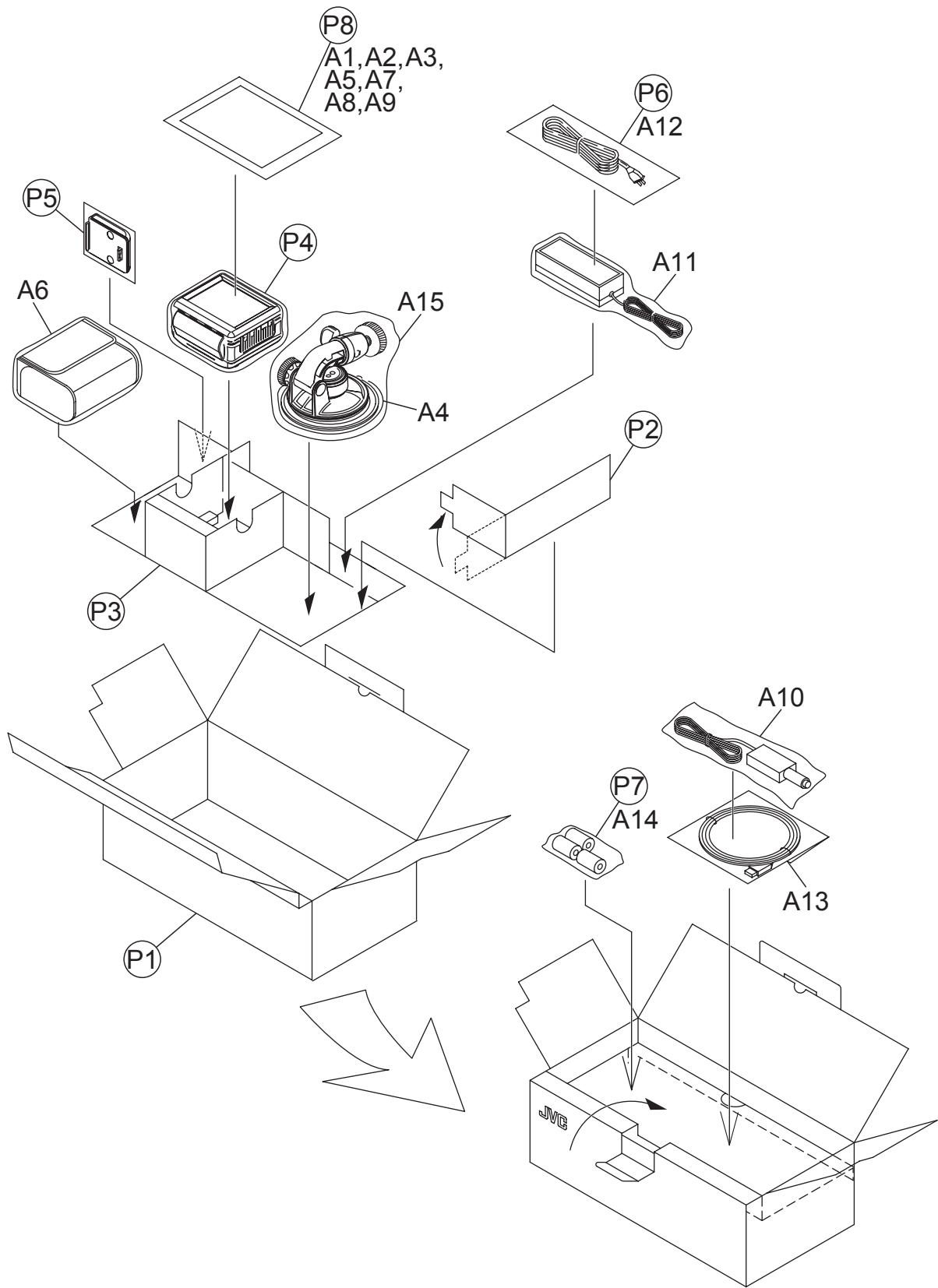
△	Symbol No.	Part No.	Part Name	Description	Local
1		LV11226-001A	FRONT PANEL		PX9BJ,PX9BNJ
1		LV11226-003A	FRONT PANEL		PX9SJ,PX9SNJ
2		LV44462-001A	JVC BADGE		
3		LV44725-001A	SPACER		
4		LV36718-002A	MIDDLE ASSY		
5		LV11228-001A	REAR COVER		PX9BJ,PX9BNJ
5		LV11228-003A	REAR COVER		PX9SJ,PX9SNJ
6		LV22265-001A	BATTERY COVER		
7		LV44614-001A	ABSORBER		
8		QAB0073-001	BATTERY		
9		LV36658-001A	DETACH BUTTON		PX9BJ,PX9BNJ
9		LV36658-003A	DETACH BUTTON		PX9SJ,PX9SNJ
10		LV36659-001A	D.BUTTON HOLDER		
11		LV40848-077A	SPACER(P)		
12		LV44520-002A	D.BUTTON SPRING		
13		LV44513-001A	ABSORBER	(x3)	
14		LV36664-001A	LED CASE		
15		LV44510-001A	LCD EARTH PLATE		
16		LV43973-009A	SHIELD TIGHT		
17		QLD0423-001	LCD MODULE		
18		LV44634-001A	FPC SHEET		
19		QQR1727-001	FERRITE PLATE	(x2)	
21		QAL0850-001	TOUCH PANEL		
22		LV44707-001A	CAUTION LABEL		
23		LV44509-002A	T.PANEL SPACER		
24		LV44507-001A	GPS SHIELD		
25		QAL0879-001	GPS ANTENNA		
26		LV40846-056A	SPACER(F)		
27		LV44514-002A	FILTER	(x2)	
28		LV36690-003A	SHIELD PLATE		
29		QAL0722-001	HDD		
30		LV36657-002A	HDD HOLDER		
31		LV40847-017A	SPACER(H)		
32		LY34998-001A	GEL	(x4)	
33		LV36764-001A	WEIGHT		
34		LV44591-001A	DOUBLE FACE		
35		QAS0448-001	SPEAKER	(x2)	
36		LV40846-057A	SPACER(F)	(x2)	
37		LV36828-001A	DUMMY CARD		
38		QYSDSF2008ZA	TAP SCREW	M2 x 8mm(x4)	
39		QYSDSF2008MA	TAP SCREW	M2 x 8mm(x4)	PX9BJ,PX9BNJ
39		QYSDSF2008NA	TAP SCREW	M2 x 8mm(x4)	PX9SJ,PX9SNJ
40		QYSDSF2008MA	TAP SCREW	M2 x 8mm(x2)	
41		QYSDSF2006ZA	TAP SCREW	M2 x 6mm(x2)	
42		QYSDSF2006ZA	TAP SCREW	M2 x 6mm(x4)	
43		QYSPSPU1725MA	SCREW	M1.7 x 2.5mm	
44		QYSDSF2006ZA	TAP SCREW	M2 x 6mm(x8)	
45		LV43819-005A	SPECAL SCREW	(x2)	
46		LV40848-071A	SPACER(P)		
48		LV36662-001A	CRADLE REAR		
49		LV36663-001A	CRADLE PLATE		
50		LV44614-001A	ABSORBER	(x2)	
51		LV44512-001A	DETACH LEVER		
52		LV44521-001A	D.LEVER SPRING		
53		GE40192-002A	SHAFT		
54		QYWDL123525	SLIT WASHER	3.5mm/1.2mm x 0.25mm	
56		LV36900-001A	NAME PLATE		PX9BJ,PX9BNJ
56		LV36902-001A	NAME PLATE		PX9SJ,PX9SNJ
57		QUQK05-4005BB-E	FFC WIRE	40pin 5cm	
58		LV40848-073A	SPACER(P)		
59		CB-PX9MAIND	MAIN BOARD		

< MEMO >

Packing materials and accessories parts list

Block No. 3

No additional / supplemental order of WARRANTY CARDS are available



Packing and Accessories

Block No. [M][3][M][M]

△	Symbol No.	Part No.	Part Name	Description	Local
	A 1	LVT1489-001A	INSTALL MANUAL	ENG FRE SPA	
	A 2	-----	WARRANTY CARD	BT-51018-5	
	A 3	-----	WARRANTY CARD	BT-52006-2	
	A 4	LV36717-001A	CRADLE SAUCER		
	A 5	LVT1489-004A	INSTALL MANUAL	ENG FRE SPA	
	A 6	LV44597-001A	POUCH		
	A 7	LVT1489-007A	INSTALL MANUAL	ENG FRE SPA	
	A 8	LVT1489-008A	INSTALL MANUAL	ENG FRE SPA	
	A 9	LVT1613-001A	CAUTION SHEET		
	A 10	QAL0859-001	CAR CABLE		
△	A 11	QAL0851-001	AC ADAPTER		PX9BJ,PX9SJ
△	A 12	QMPE410-160-JC	POWER CORD(US/CA)	1.6m BLACK	PX9BJ,PX9SJ
	A 13	QAM0787-002	USB CABLE		PX9BJ,PX9SJ
	A 14	QQR0491-002	FERRITE CORE	TDK (BLACK)(x3)	PX9BJ,PX9SJ
	A 15	LV22284-006A	MOUNT KIT ASSY		
	P 1	LV36933-002A	CARTON		PX9BJ
	P 1	LV36934-002A	CARTON		PX9SJ
	P 1	LV36845-001A	CARTON		PX9BNJ
	P 1	LV36847-001A	CARTON		PX9SNJ
	P 2	LV44675-001A	CARTON SPACER		
	P 3	LV36841-002A	ACCESSARY BOX		
	P 4	LV44652-001A	FORMED POLY BAG		
	P 5	QPA00801205	POLY BAG	8cm x 12cm	
	P 6	QPA01203005	POLY BAG	12cm x 30cm	PX9BJ,PX9SJ
	P 7	QPA01001205	POLY BAG	10cm x 12cm	PX9BJ,PX9SJ
	P 8	FSPG4002-001	POLY BAG		

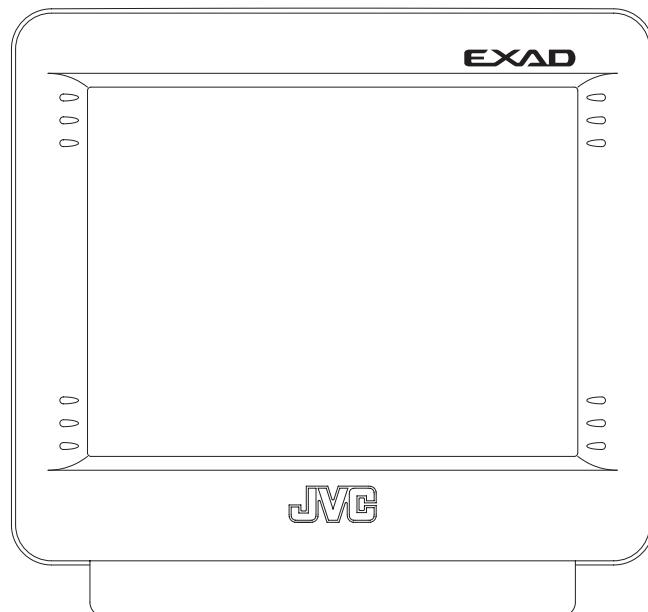
JVC

SCHEMATIC DIAGRAMS

Portable HDD Navigation

**KV-PX9BJ, KV-PX9SJ
KV-PX9BNJ, KV-PX9SNJ**

CD-ROM No.SML200606



EXAD **NAVTEQ**
ON BOARD

Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

Contents

Block diagram	2-1
Standard schematic diagrams	2-3
Printed circuit boards	2-17

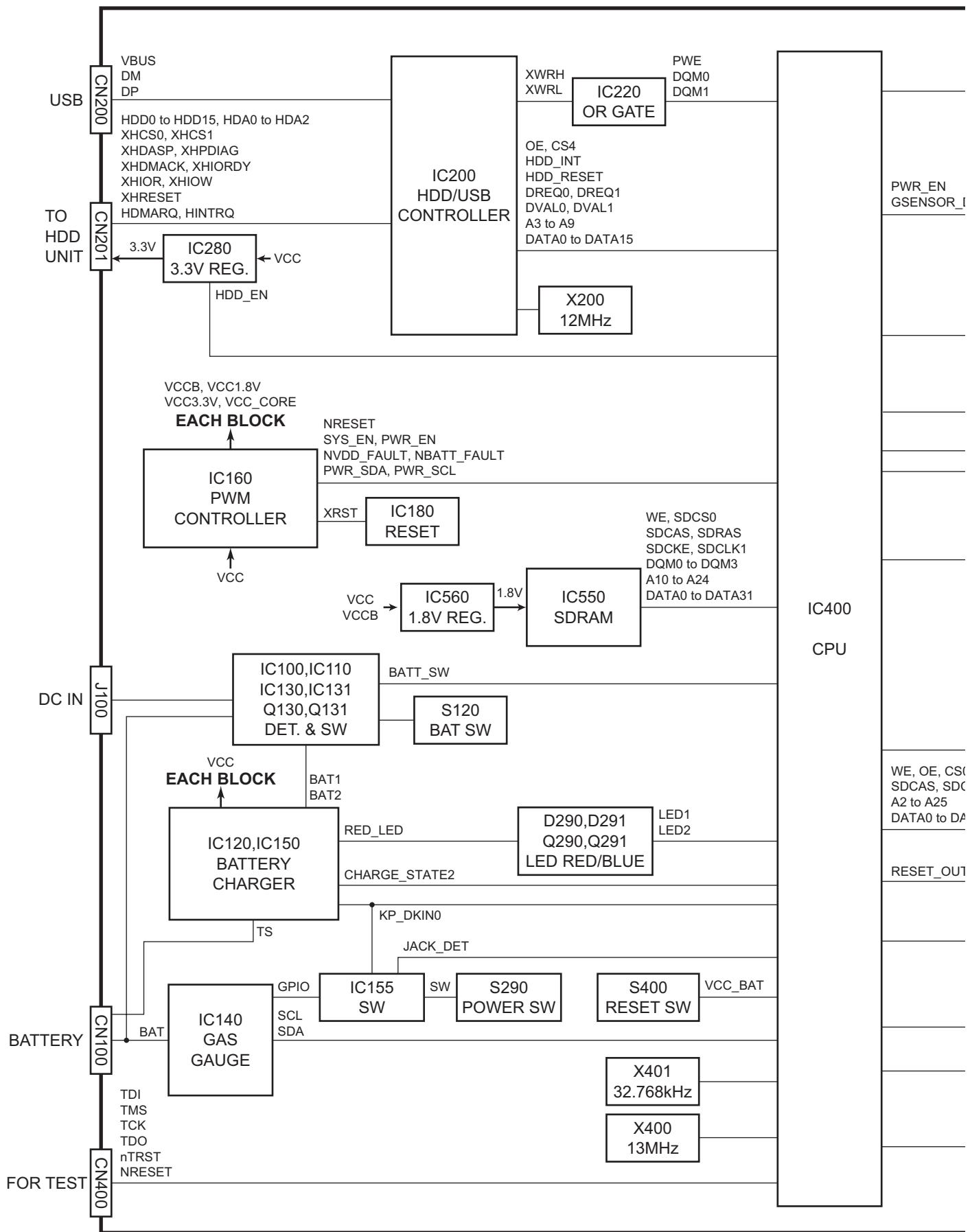
Safety precaution

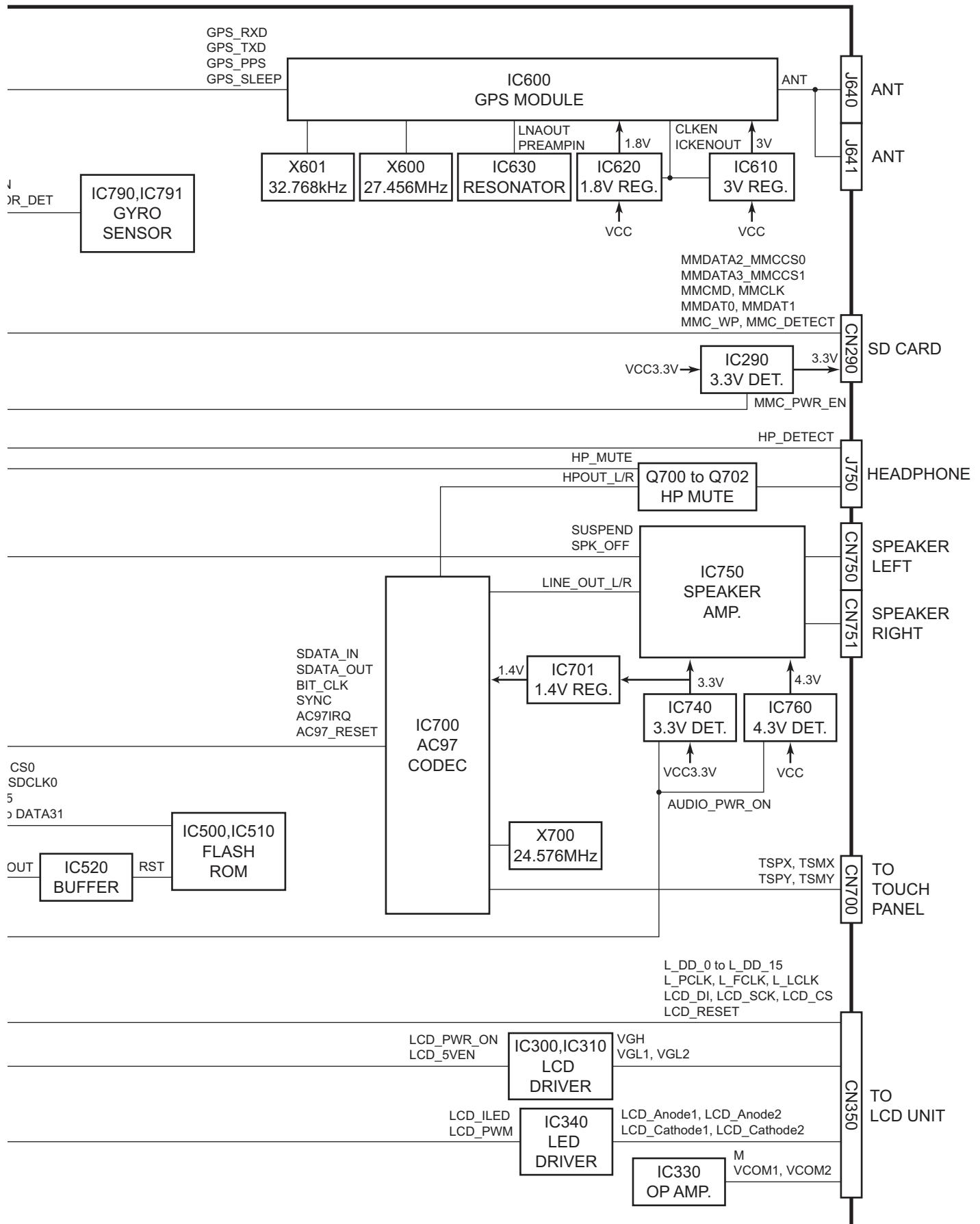


CAUTION Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of performing repair of this system.

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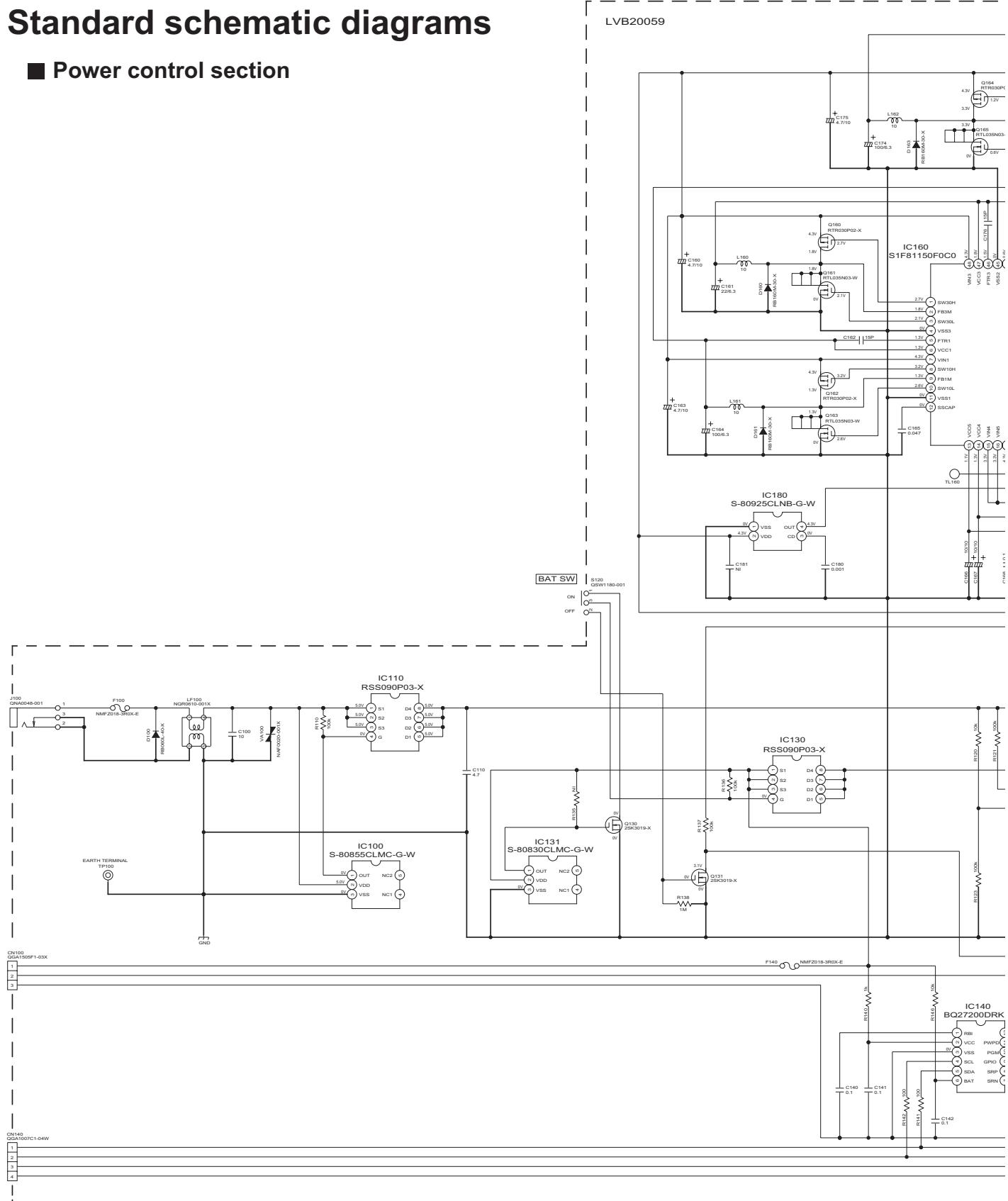
Block diagram

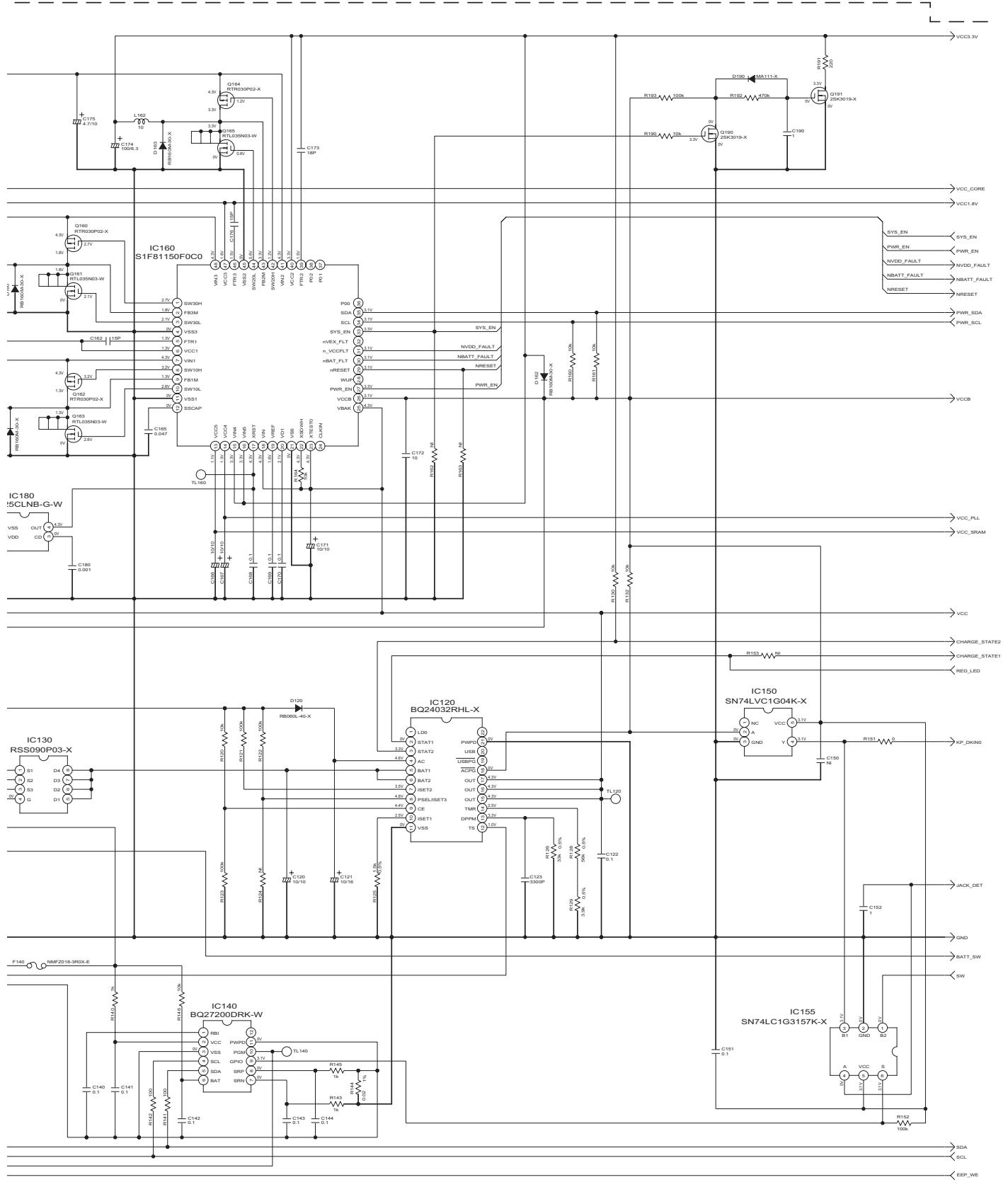




Standard schematic diagrams

■ Power control section

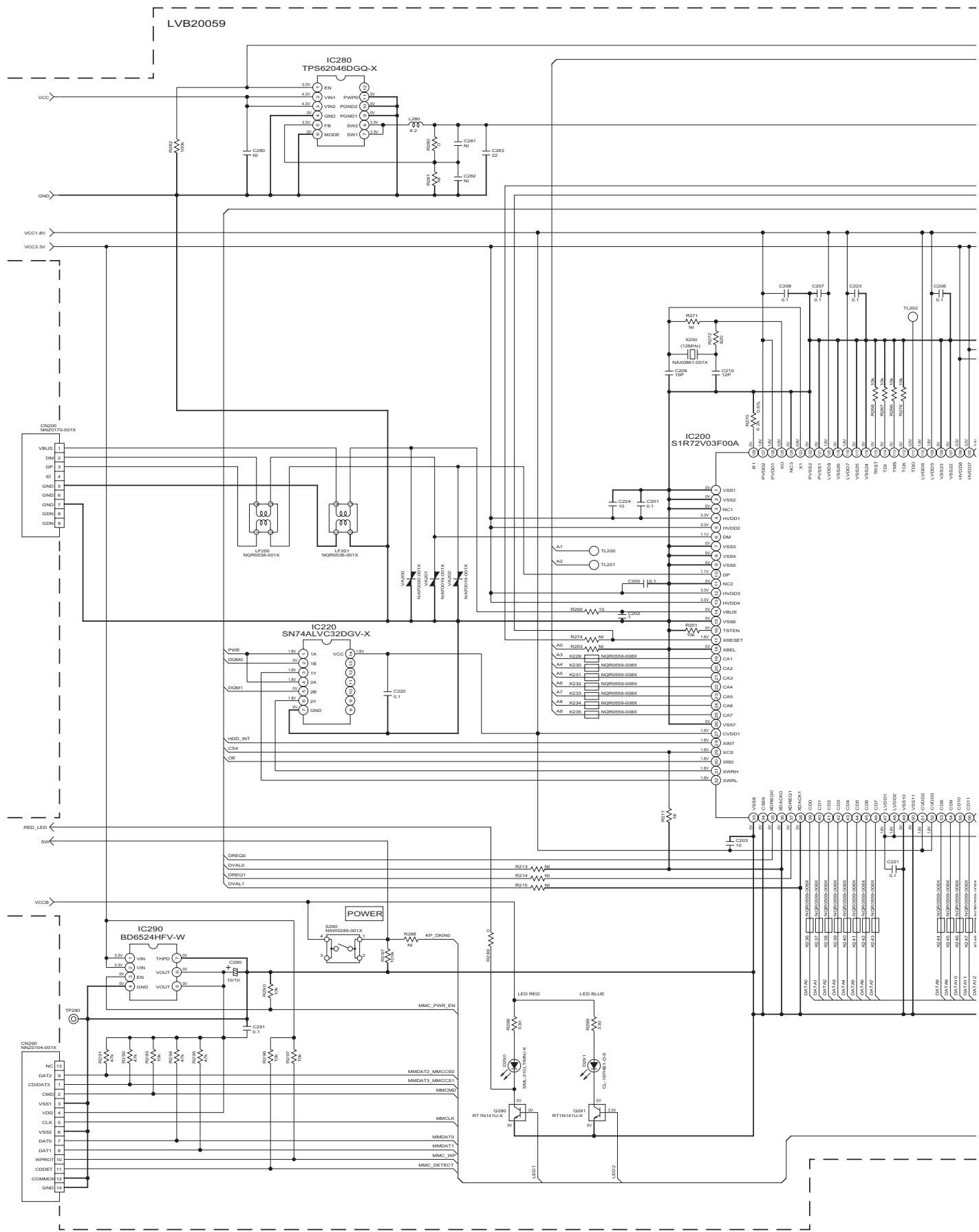


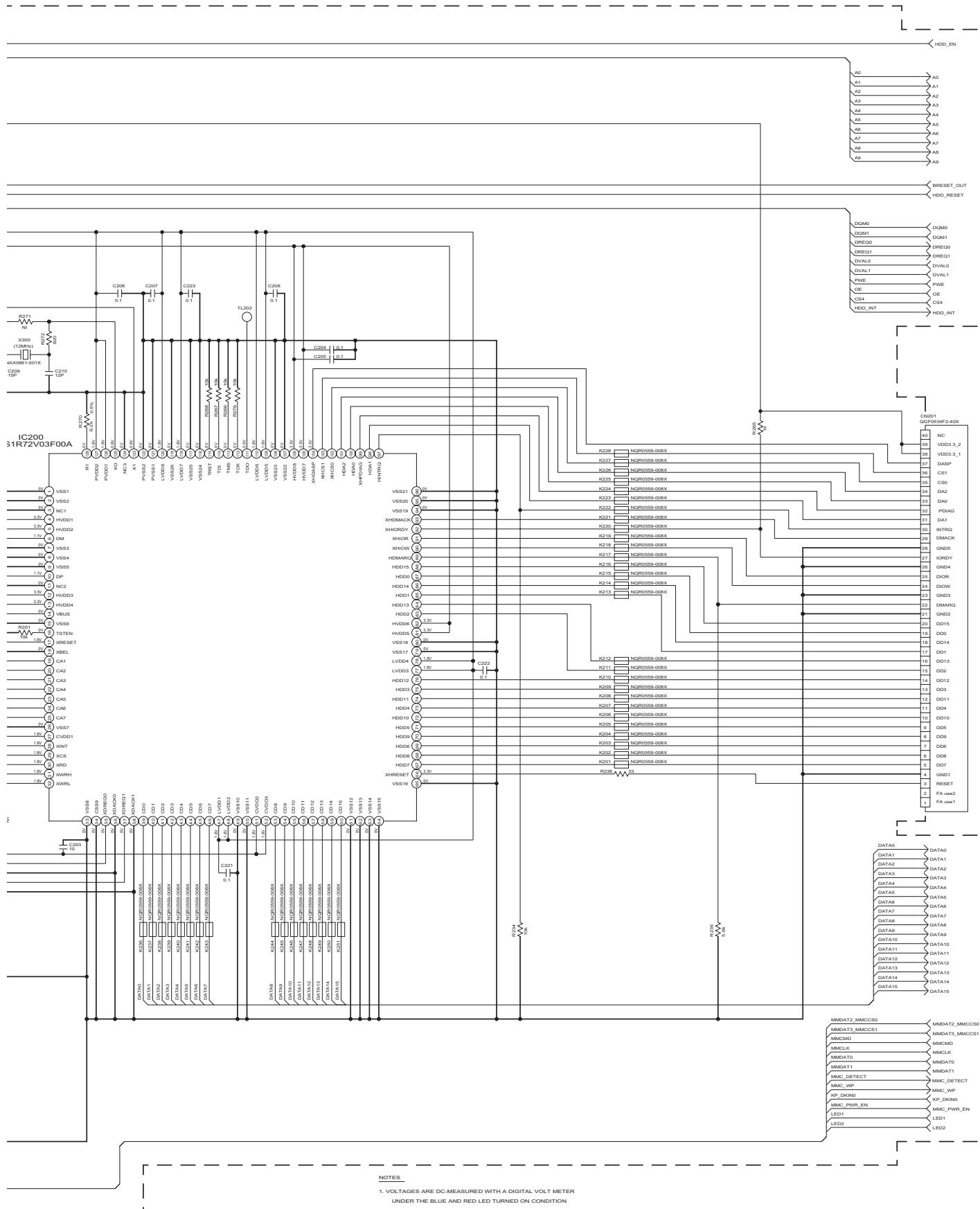


NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER
UNDER THE BLUE AND RED LED TURNED ON CONDITION
WITHOUT GPS SIGNAL.
2. UNLESS OTHERWISE SPECIFIED,
ALL RESISTORS ARE 1/16W ± 5% METAL GLAZE RESISTOR.
ALL RESISTANCE VALUES ARE IN Ω(P=PF).
ALL E CAPACITORS ARE SHOWN IN THE FORM OF
CAPACITANCE(εF)RATED VOLTAGE(V).
3. NI STANDS FOR NOT MOUNTED PARTS.

■ USB/HDD/SD section



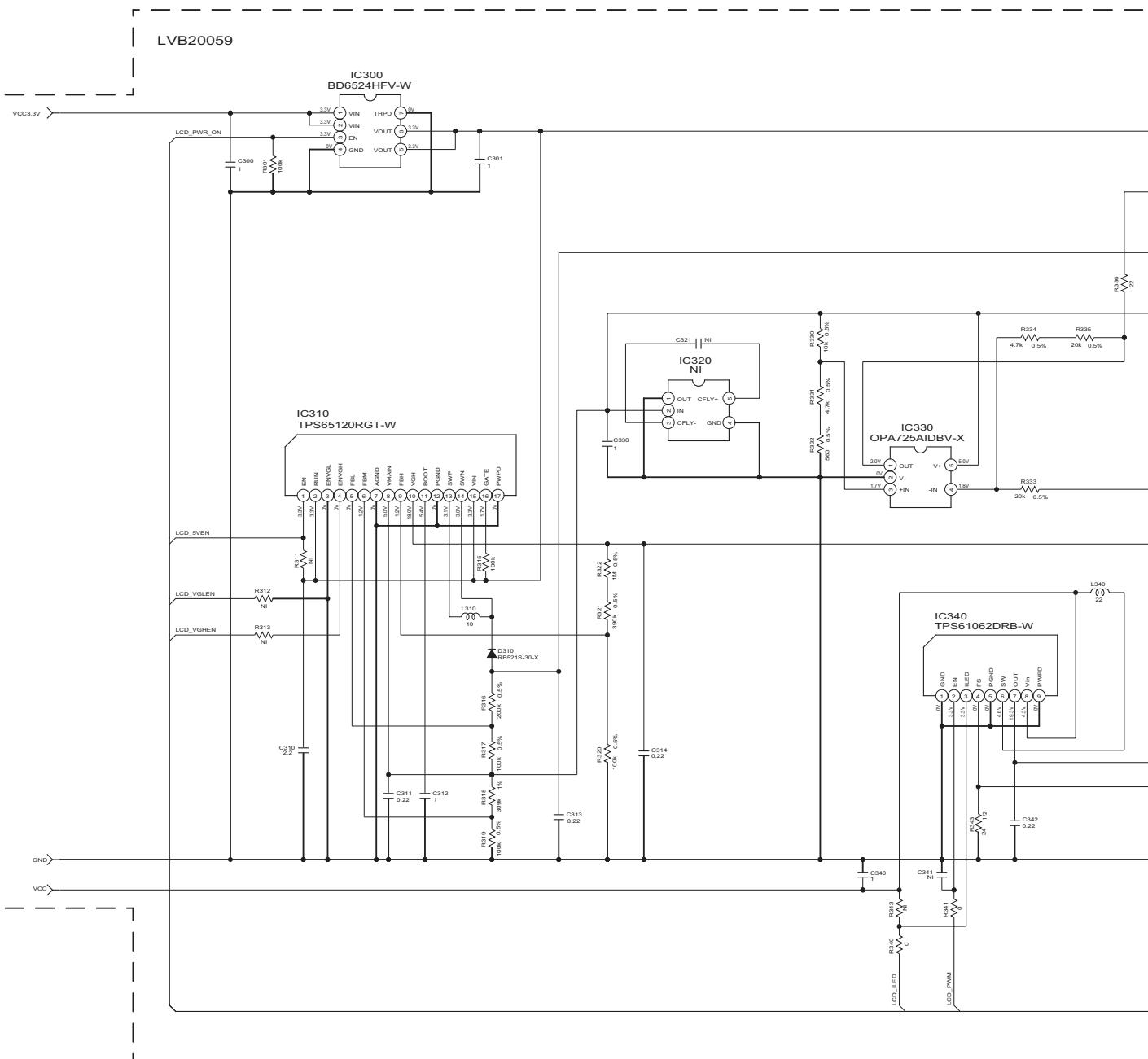


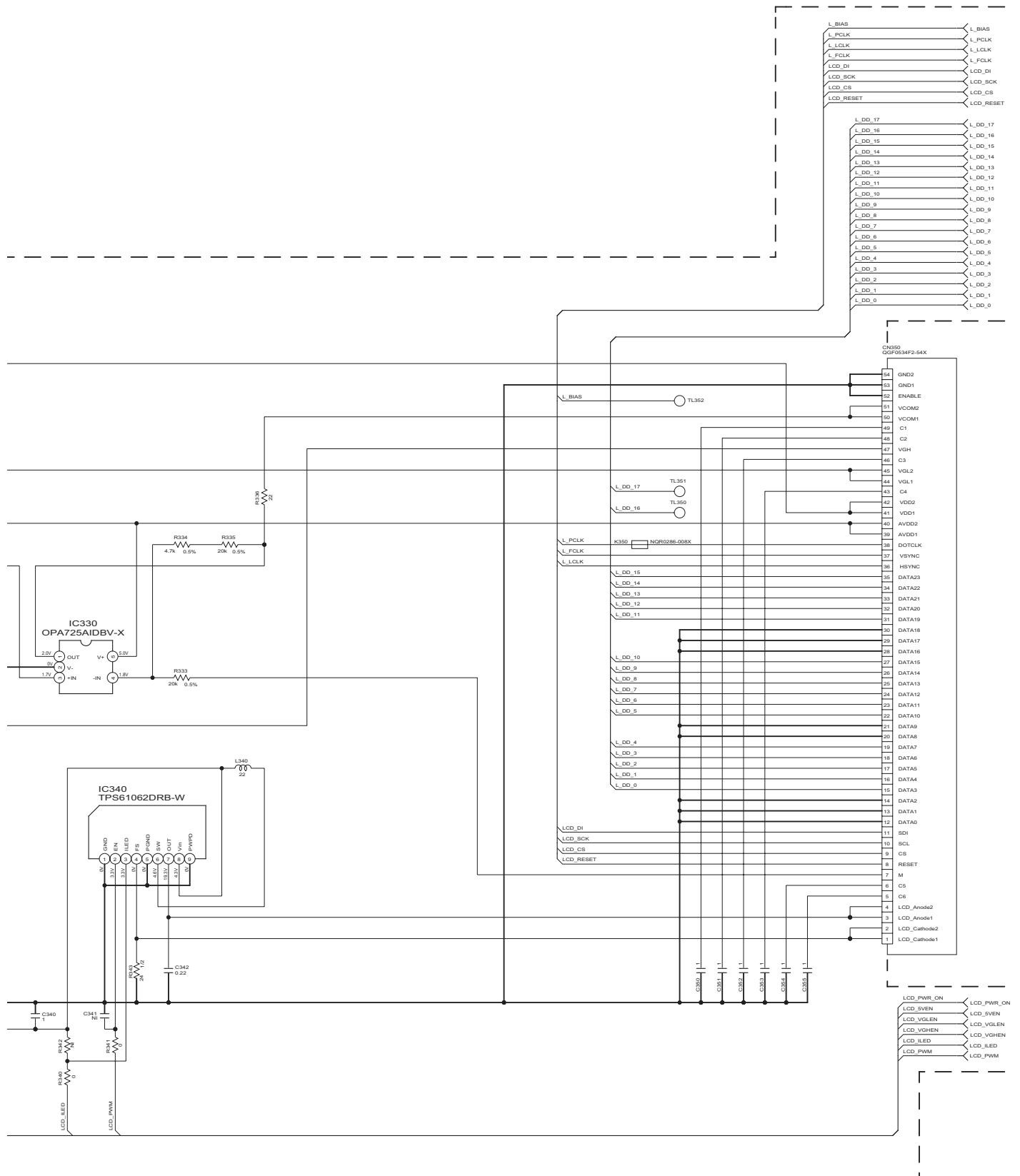
NOTES

- NOTES**

 1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER UNDER THE BLUE AND RED LED TURNED ON CONDITION WITHOUT GPS SIGNAL.
 2. UNLESS OTHERWISE SPECIFIED,
ALL RESISTORS ARE 1/16W $\pm 5\%$ METAL GLAZE RESISTOR.
ALL RESISTANCE VALUES ARE IN OHM.
ALL CAPACITANCE VALUES ARE IN μF (μF).
ALL E CAPACITOR ARE SHOWN IN THE FORM OF
CAPACITANCE(μF)RATED VOLTAGE(V).

■ LCD control section

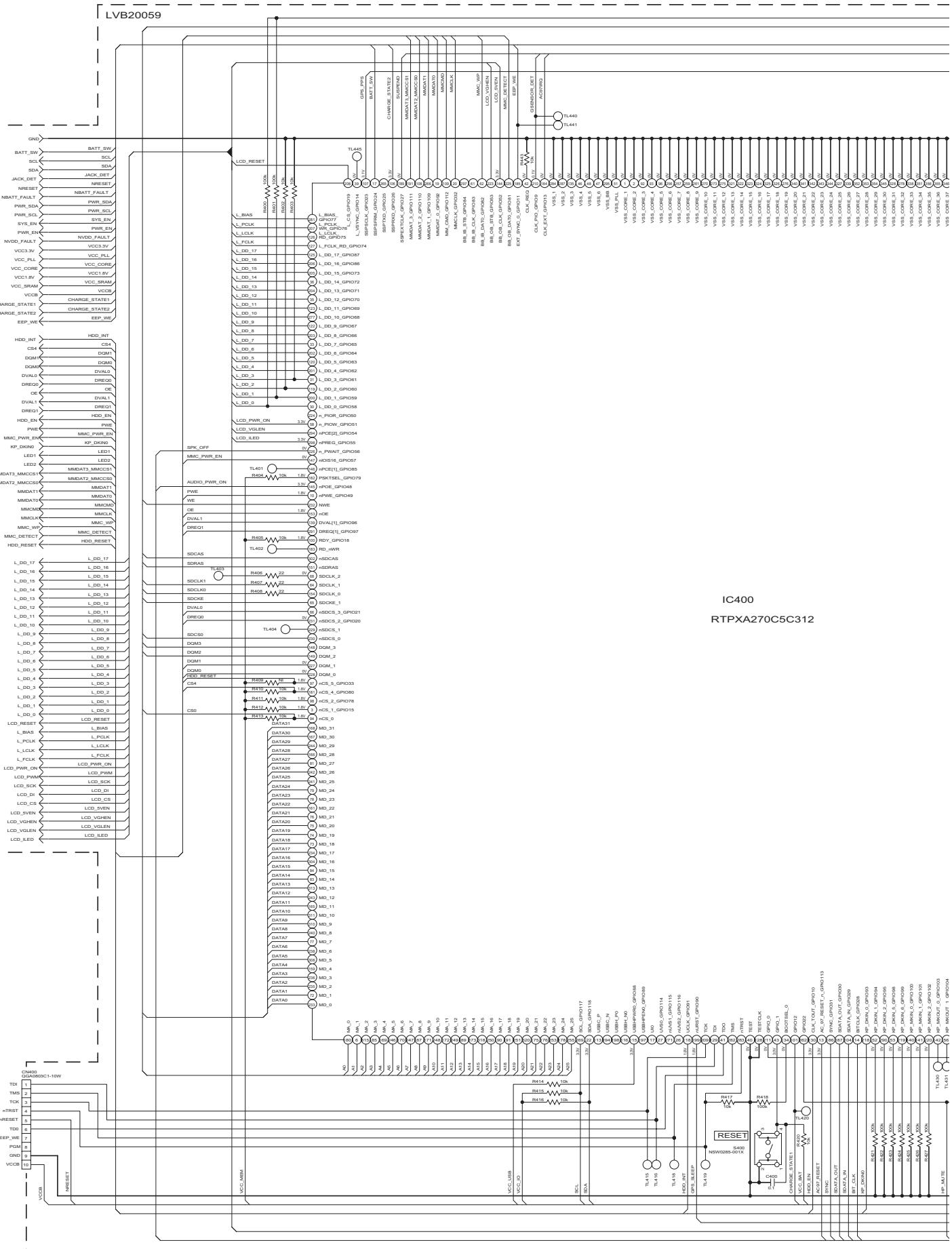


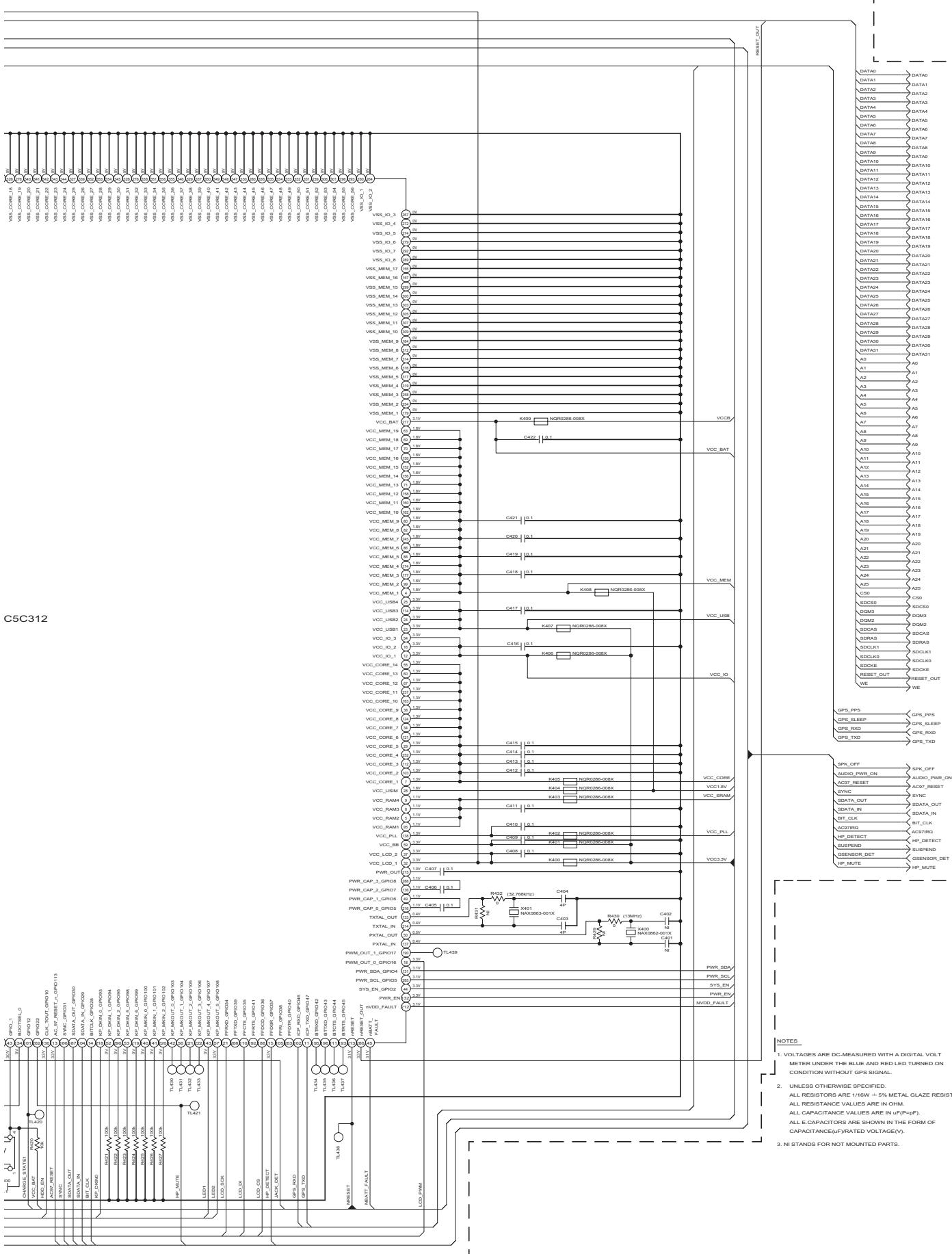


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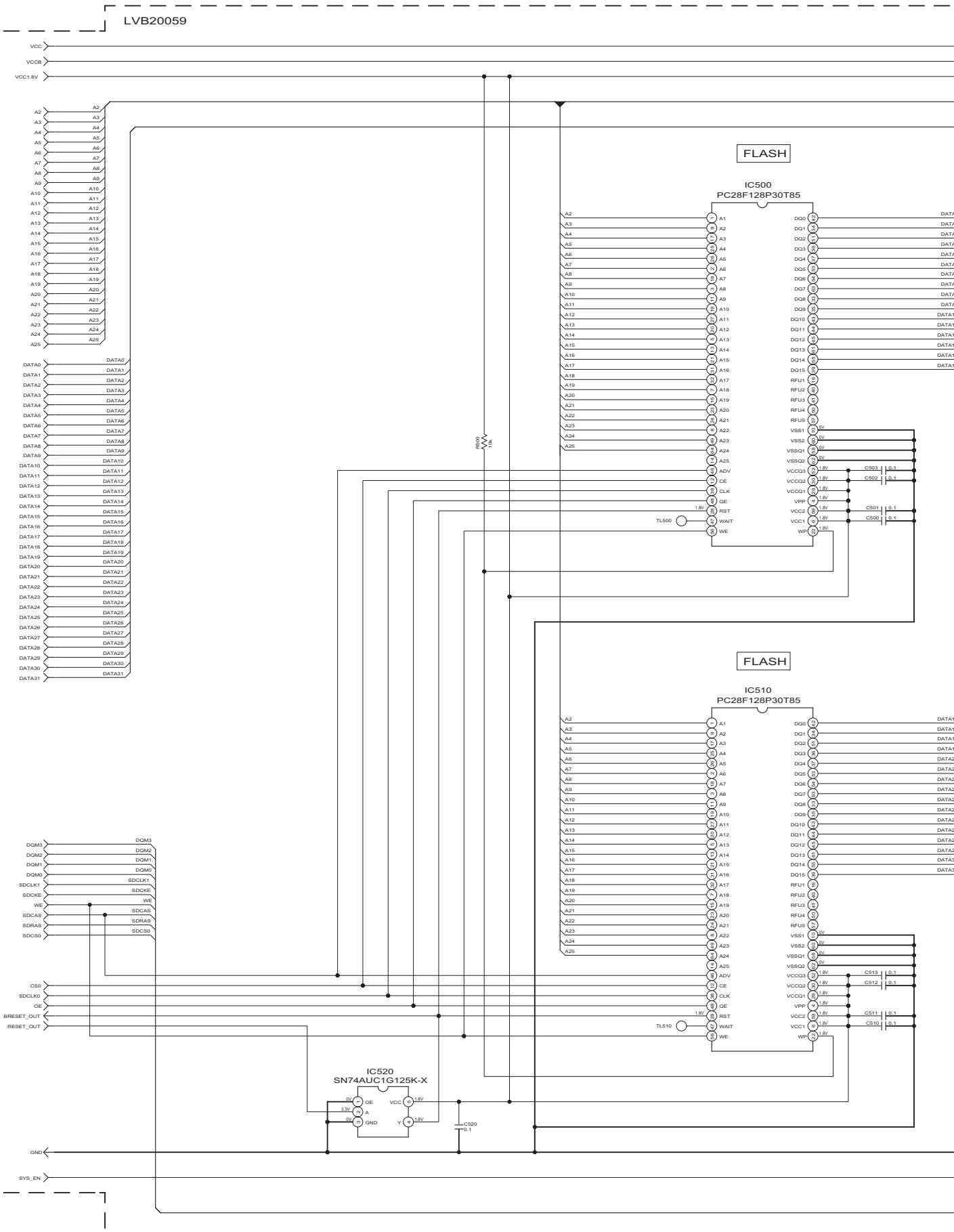
- VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER UNDER THE BLUE AND RED LED TURNED ON CONDITION WITHOUT GPS SIGNAL.
- UNLESS OTHERWISE SPECIFIED.
ALL RESISTORS ARE 1/16W ± 5% METAL GLAZE RESISTOR.
ALL RESISTANCE VALUES ARE IN Ω.
ALL CAPACITANCE VALUES ARE IN μF(P-P).
- NI STANDS FOR NOT MOUNTED PARTS.

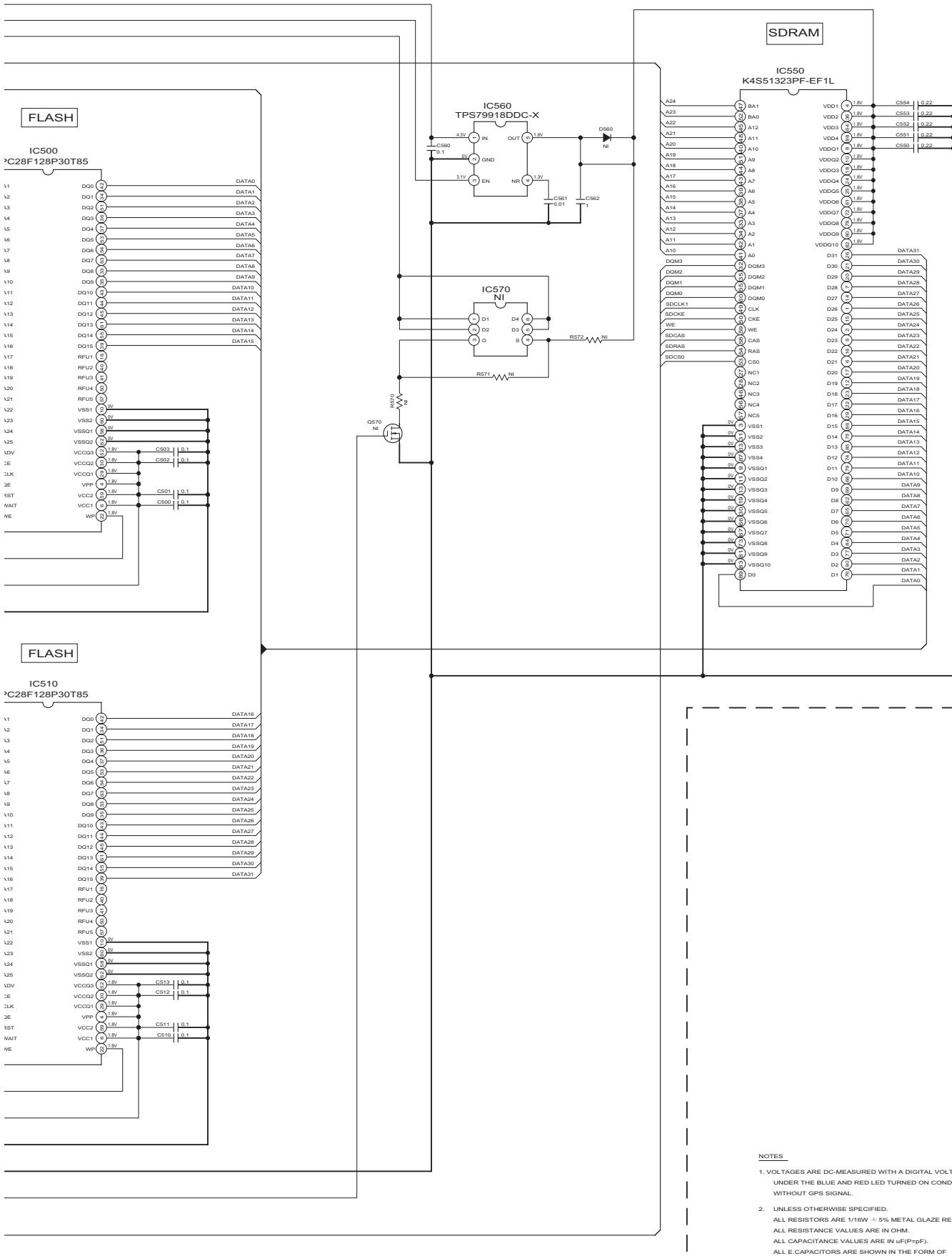
Main CPU section





■ Memory section



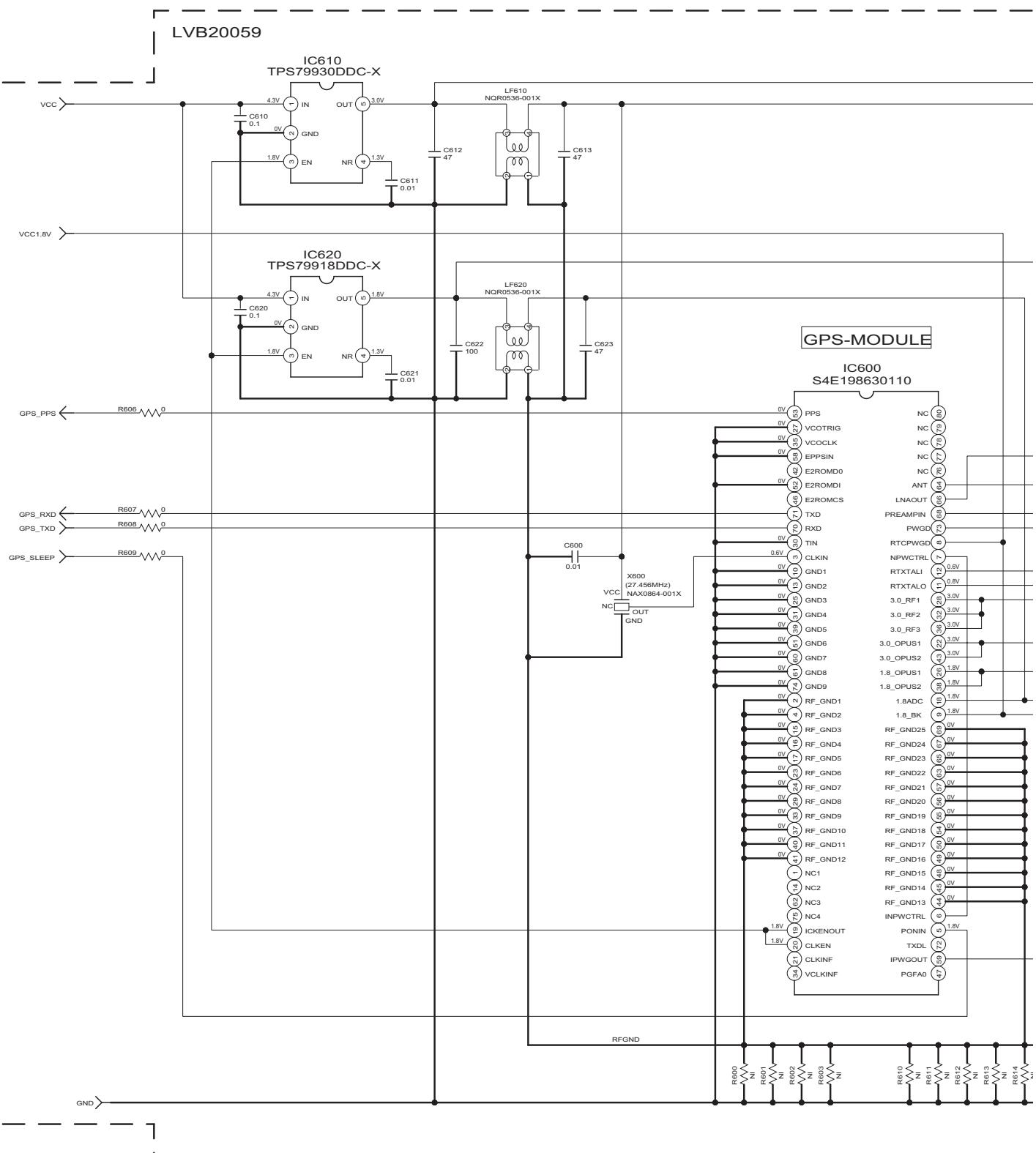


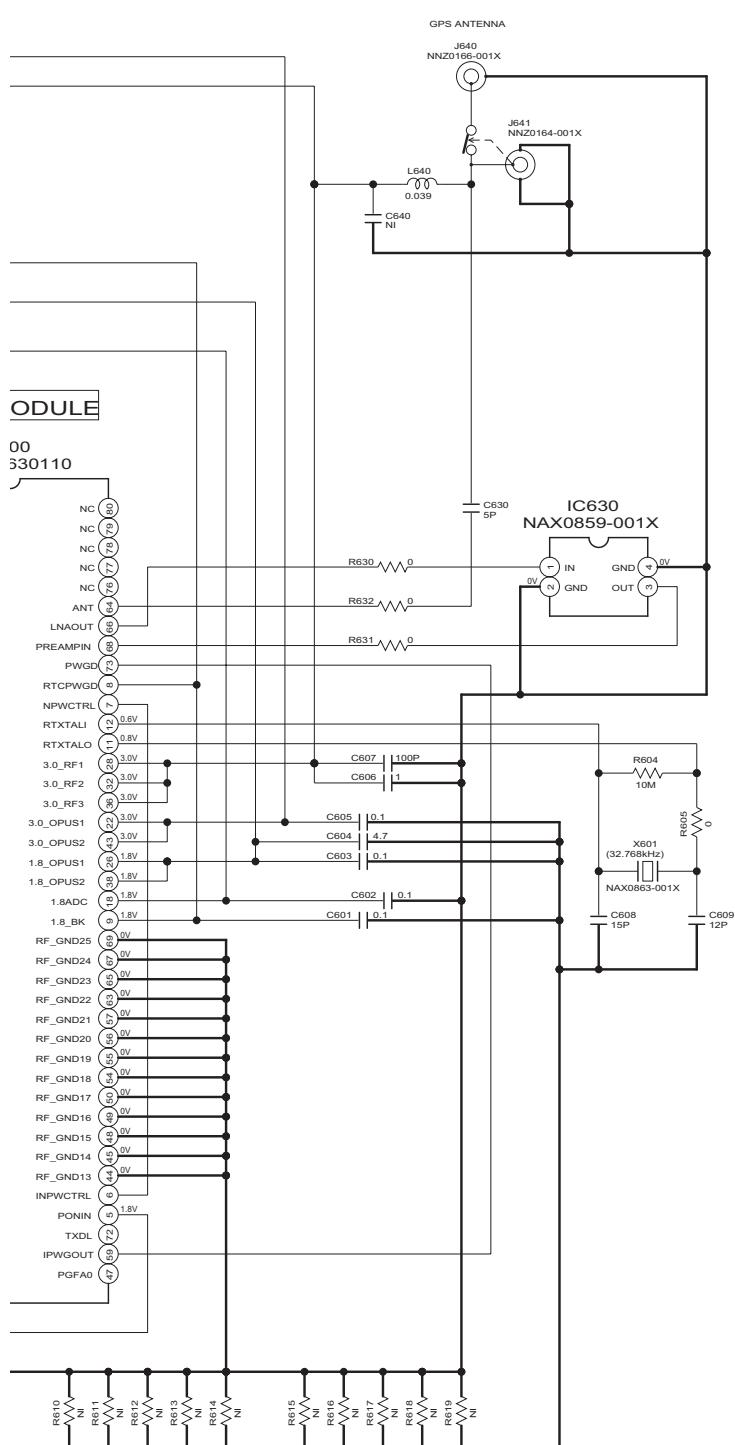
NOTES

1. Voltages are DC-measured with a digital voltmeter under the blue and red LED turned on condition without GPS signal.
2. UNLESS OTHERWISE SPECIFIED.
ALL RESISTORS ARE 1/16W $\pm 5\%$ METAL GLAZE RESISTOR.
ALL RESISTANCE VALUES ARE IN OHM.
ALL CAPACITANCE VALUES ARE IN μF (pF).
ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF)RATED VOLTAGE(V).

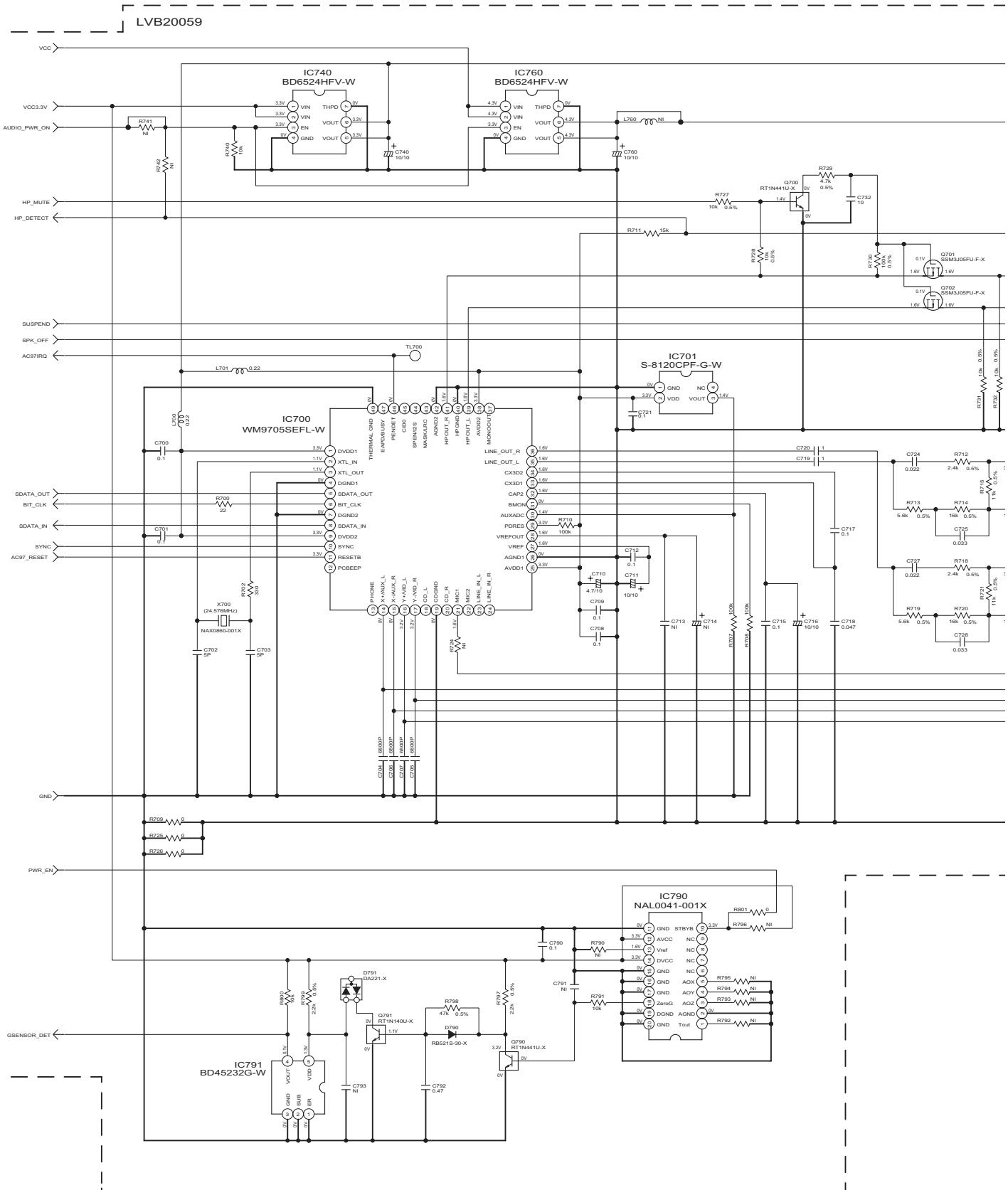
3. NI STANDS FOR NOT MOUNTED PARTS.

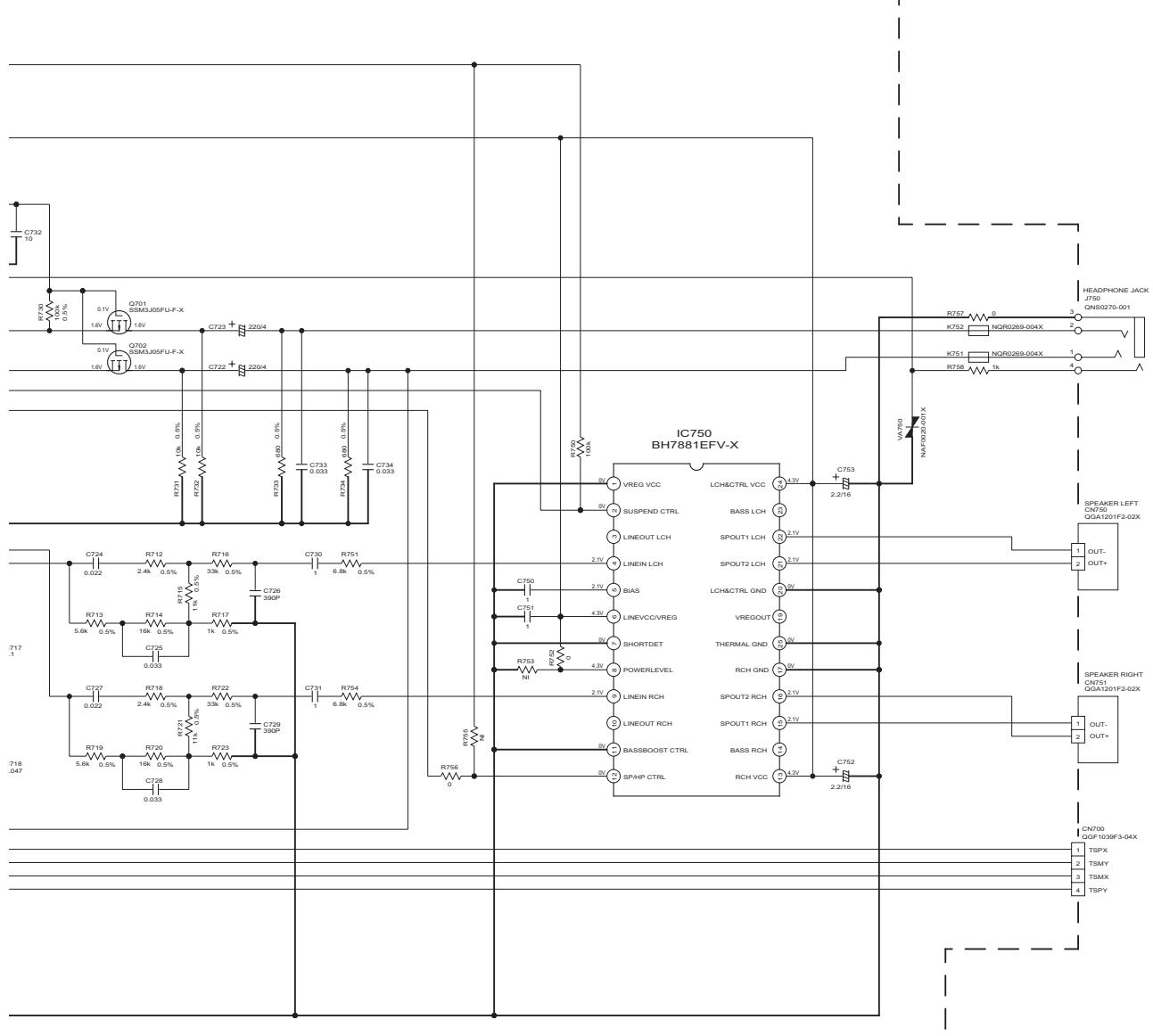
■ GPS receiver section





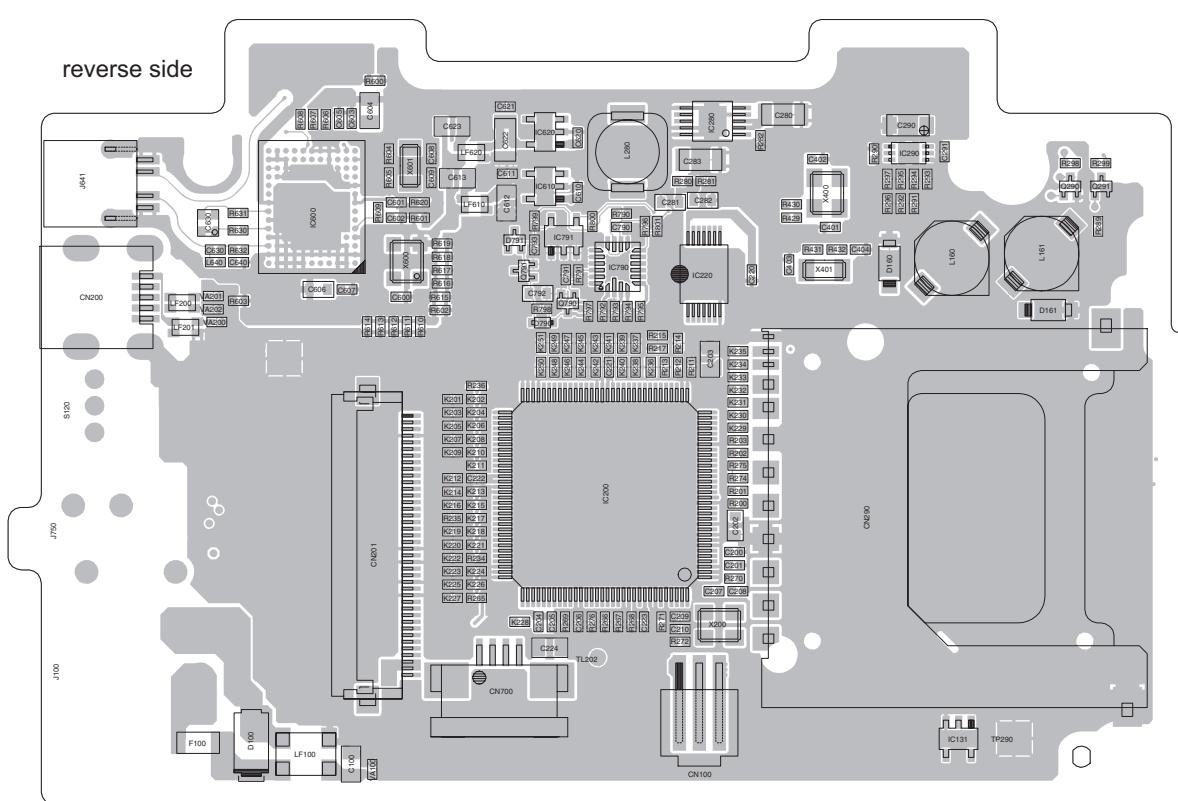
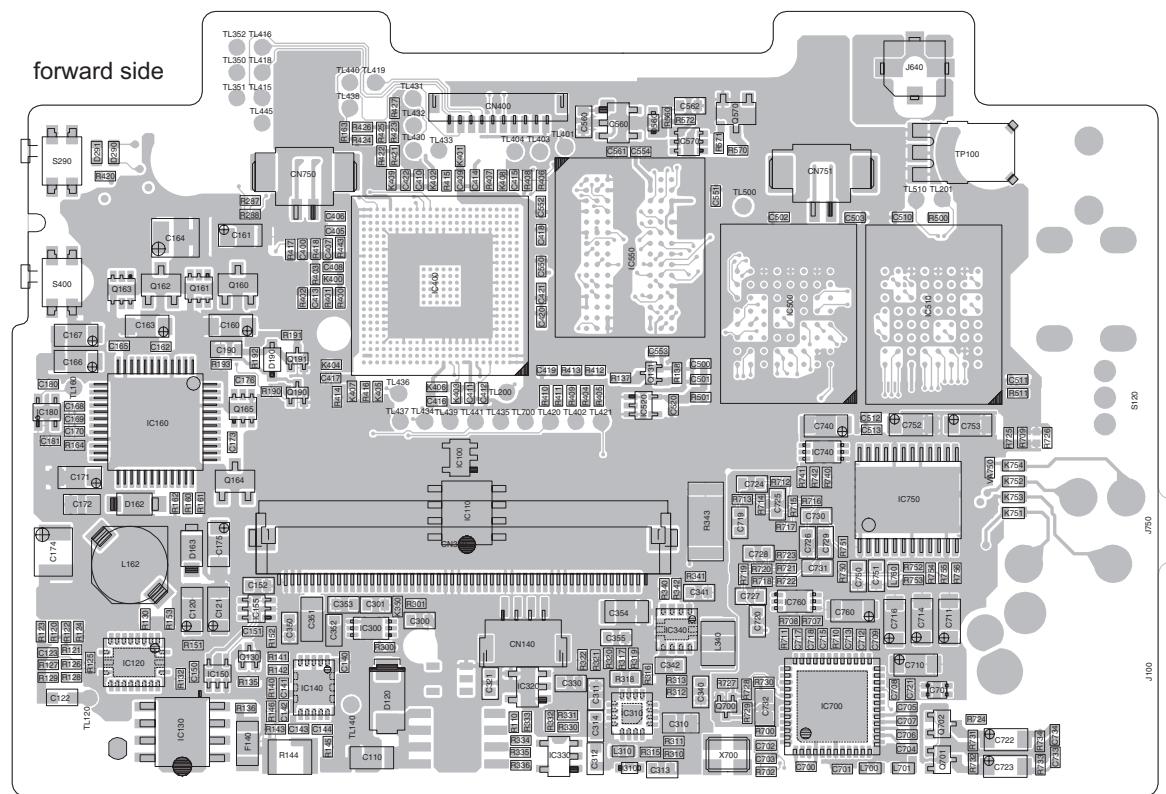
■ Audio section





Printed circuit board

■ Main board Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)



< MEMO >

JVC

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